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## New England Surgical Society

Dr. Frederic J. Cotton, Boston, read a paper on "The Present Status of Treatment of Non-Union and Delayed Union" (*from manuscript*).

Dr. Frederic J. Cotton, Boston: Mr. President and gentlemen, non-union and delayed union, of course, have always been sources of worry to surgeons, and they are now and perhaps they always will be. The index of the amount of trouble they make is perhaps the amount of literature on the subject. I have no wish to add needlessly to this literature, and my excuse for taking it up is because we have gotton to the point where we know pretty well what can be done, and I think I and my associates can give results in a given case. That has been only with the last few years. I have no new method to propose but it is only the establishment of a working routine (*reading manuscript*).

### NON-UNION IN SHAFT FRACTURES: THE TREATMENT

The question of non-union or delayed union is a worry to all surgeons, has been and will be. Like most such the subject has been written to death, with treatments galore proposed and lauded.

And here I am at it again with no other excuse than first, that I have no treatment of my own; second, that I believe we are today in a position to carry out effective treatment in the great majority of cases.

First, one must define, I suppose. One does not mean non-union with pointed, wasted bone-ends opposed across a gap like the carbons of an arc-light. This may occur from sheer malnutrition or constitutional disease—a vastly rare instance—or in cases of great loss of bone as in gunshot wounds or in septic compound fractures with crushing in civil life,—to be remedied in the first case not at all, in the second only by extensive bone plastic operations—commonly with some type of massive bone graft.

Nor need one class here the cases of mild delay, a mere lengthening of the schedule of normal processes by a fortnight or a month.

What one has in mind is the common class of cases in which union is long overdue—months or it may be years.

The condition is grave or less grave not according to the time but according to the tissue conditions.

Roughly we meet three type pictures:

No union worth talking about after months—usually with malposition and showing, in the x-ray, something between the bones, little callus as a rule, and more or less rounded bone-ends. These are apt to be fractures of the femoral shaft and despite the lack of callus are problems of correction and fixation rather than of nutrition. Let us call these the *displacement cases.*

Second, those which are just wobbly or springy, and show in the x-ray a picture which you would call normal except for the late date attached—the simply *delayed unions.*

Third, those with definite, often slight, mobility, with plenty of callus showing in the film, little or much deformity, plenty or more of callus, but, running across this heaped up mess of callus a space usually very irregular, narrow, but with *no* forming bone encroaching on it and its upper and nether boundaries definitely defined by a more or less dense layer, like a thin cortex.

These are the *non-unions* as we meet them, the cases that have reached a *status quo* and will not often repair without operation.

As to causes let us let it go at: first, something between the bones; second, imperfect setting; third, and mostly, imperfect fixation.

Add to these lack of care for free circulation, failure to use massage in cases (like those with great tissue reaction) which demand it.

Beyond this, discussion of causes gets us nothing. Old age, systemic disease, are excuses rather than causes in practice.

Tabes, Paget's disease, osteomyelitis, cysts, etc., are rare and more than that usually give union, and syphilis, blandly accused of a tremendous percentage of cases by Willard Bartlett a while ago, is to be watched for, of course, but as a real cause is just about as common as cancer or sarcoma.

As to incidence, our cases are lower leg, femur, humerus and forearm in about that order of frequency,—and all rather frequent, not rare in our own cases, less rare in those deeded to us by predecessors in responsibility.

Now as to treatments.

Some of us recall the old stimulation of bone pegs driven in. Most of us remember the refreshing and wiring operation,—not such a bad way though wire is not good.

Then passive congestion, not very successful.

Then v. Schmieden's blood injection, not without merit, but technically difficult, and my method of attempting the same thing by jabbing with a tenotome, also of some use.

Also, all sorts of nutritional medication in diet, the use of thyroid extract, etc.

Then bone-plating and bone-grafting, and latterly the more elaborate bone grafts and boiled bone inserts in increasing elaboration of artisan's technique.

Then of old the massage treatment, and the treatment of use, as in walking.

Latterly electrical treatment and baking and particularly the intense electro-baking treatment we call diathermy.

No use going over it all, for one may sum it up rather briefly.

The older methods were none of them very successful and of late the fashion has been bone-grafting.

And, as done, that hasn't worked too well,—in fact, in the hands of the average competent surgeon it has done badly and in the hands of experts the proportion of failures is not small.

Unfortunately the method is an advertised one, likely to be applied by experts, as it has been so often and so needlessly, to cases that repair in spite of it, and in cases that really need intervention, so difficult mechanically and with such chances of failure, not seldom involving sepsis and disaster, as to make the experienced fracture men "choosy" in using it, still more chary of recommending its general use.

Those of us who took up the seductive plan of intramedullary beef-bone grafts and watched the slow progress of repair in the medullary cavity, stripped of vessels for many inches, are not going to do this any more if we can find another way.

McWilliams not so long ago analyzed cases in New York and concluded that only the chip-grafts showed good averages and though I doubted it then, I now know he was right.

The big grafts are hard to set, involve a lot of manipulation and much interference with nutrition from tension (hence more sepsis risk), but particularly they have very limited holding power and very limited repair power in themselves though better than the intramedullary graft which devitalizes with almost no chance of *firm* fixation.

In the operation itself, there are but a few things we can really do.

1. Refresh surfaces.
2. Fix by plates, or better by splints, if it can be done; by wedging of the small grafts between fragments and minimizing splint pressure, which is best of all.

I have always hesitated to put in grafts in a case in which a plate is used, but have done it and have gained the belief that it carries no extra foreign body risk. In fact, however, the cases one must plate are usually the "displacement" cases in which grafts are about superfluous as a rule.

Now as to what one does do in fact.

In what I have called displacement cases with ends not together, often with muscle between, one must get real fixation of the ends, of the properly trimmed ends.

Since in these cases the soft parts have long since "set" in distorted fashion, the muscles short, proper position maintainable only against heavy spasm, one must use a plate. A graft would hardly stand a chance, and I know of one case of femur fracture with non-union in which two Sherman plates were broken, after successive operations. This is an argument not for multiple plates, however, but for exact squaring or fitting of ends and for reënforcing even a plate with splints.

Practically all the bone plates used by me in the last two years have been in these non-union cases. In a part of them I used small grafts also in and about the refreshed edges.

In the simple delayed unions, nutrition rather than correction or fixation is apt to be the problem. One need not tear the ends apart widely; many cases can be handled by refreshing with a little curette between fragments and driving in grafts to fill the gap. Usually this provides for fixation as well as bone stimulation and with splints gives rigidity.

With the "*non-unions*" one must, as a rule, do a bit more but there is here mostly a great excess of callus so that a fitting of refreshed ends and a locking in one or another position of tension (a locking held by a splint put on on the table) takes care of fixation and the grafts help wedge the fragments in place.

As to the cutting of "chip-grafts"—osteoperiosteal grafts often so called—they should come from porous bone rather than hard cortex, for such bone has real growth power. If they are to lie alongside as tiny splints or be tucked up under periosteum one wants a periosteal layer. For wedges and filling between fragments do not take periosteum or else scrape off any taken.

Sometimes one can cut grafts in the operative wound; rib grafts may be used, especially if one does not care for periosteum; but the best place in general is the flattish-concave surface on the inner front of the tibia below the knee where tuberosity merges into shaft. Here the bone is of right quality and one can cut a lot without weakening the bone. From here down the flat front of the bone, clear of the dense bone of the edge of the shin, is the best source.

Cut them with a gouge, or a chisel with two edges meeting at an angle. I see no use in a saw.

So much for the general operative lines.

After-care is rest until one is sure of the beginning of aseptic repair.

But all this is only half the story and (unless in the displacement cases) one may not leave the rest to tell itself.

We are dealing with bones either originally a bit low in repair power or become abnormal in their repair process before our operation.

This means that we must use every stimulus to bone repair.

Most important is the stimulus of increased circulation and for this artificial congestion is preferable, I find, to the mild stimulation of massage. Massage is of value and is to be used, but for its effects on the general circulation of the limb, not with any notion of direct effect on circulation or nutrition deep in at the bone level. Moreover, massage must be most cautious and unless supervised is risky. Twice within the year I have seen fracture positions ruined by the masseuse, and not seldom have I suspected that physiotherapy as practiced did harm not good by keeping up slight motion at the break.

Baking is of real value, and safe.

Best of all is diathermy, the method by which two high frequency currents meeting at a predetermined point *within* the limb develop heat just where we want it, in the depth of the tissues.

For years some of the physiotherapy enthusiasts made great claims for this method.

Dr. F. B. Granger and I a year and a half ago determined to try this out and have worked on about two dozen cases with diathermy applied two or three times a week. There have been two failures in humerus cases, one still doubtful case of a reoperated ulnar fracture. Clinically we now have a solid union, but x-ray does not yet show complete union. This last seems to be a case of actual inability to make bone though the patient is a healthy girl. The humerus cases, both of breaks just above the elbow, both inveterate cases, operated on, failed obviously because we did not succeed in our attempts at fixation.

All the other cases, legs and arms, are now solid.

The cases varied from one of sheer lack of bone formation, or even preliminary bone softening in a leg fracture at seven weeks, to a case of three years' duration, treated for nearly a year after a grafting operation, so that citation of cases would be a weariness only.

Suffice it that we are both convinced that the treatment is of value, and of high value, in promoting circulation and therefore bone callus formation. That it does more than this we cannot state, but this is enough to turn the tide. And remember we started this as a trial, both of us skeptical about it.

The next item is function. So far as it can be accomplished without moving fragments, use will do as much as diathermy in promoting bone growth and in certain cases I have relied on it, entirely to the neglect of Dr. Granger, and with results.

If we can get a weight-bearing, surface to surface, without mobility, it works wonders *but* it must be without motion.

I am not ingenious enough to apply this to arm or forearm fractures effectively, one cannot really fix, and must be dependent on the operative measures and diathermy. Usually this suffices as our older reliance on operative measures alone often did not.

In leg fractures we are better set, but to get results we must work carefully in fitting apparatus. For the femur one needs a carefully fitted Thomas splint of the convalescent caliper type and laced leathers, front and back, to give absolute support. Still further I use coaptation splints lying within the laced leathers over the point of fracture. And then the patient walks.

For lower leg fractures a Thomas of the same type for the high ones. For the usual ones, at the middle or at mid and lower third, I use double uprights outside the shoe, set into a plate under the shank and imbedded in the heel. There is a half circle at the top behind, the half circle completed with a strap. There is an ankle joint, but at the start they walk with the ankle stiff, the joint stopped with a pin removed as union progresses. Most important are broad leathers front and back, lacing so as to hold the limb snugly. This gives a fixation better than any plaster.

And with it they walk and get solid.

A word as to tests. It is very hard to be sure and I have long made it a rule to call a case solid only when the x-ray shows repair across the gap and across all of the *gap*. Amount of callus, apparent solidity on handling mean little.

Our resource then in delayed union is fixation, use, diathermy: operation to correct and to fix in the displacement cases, in the others operation not primarily to fix but to refresh and to stimulate by grafts, preferably the grafts that grow best and have least tendency to work loose under minimal motion, namely, osteo-periosteal "chip" grafts of no great size.

And then, splint fixation, diathermy and use.

In our hands it seems to have worked out to a comfortable routine which we can apply with a confidence not previously ours.

## DISCUSSION

Dr. Robert B. Osgood, Boston: Mr. President and gentlemen, I had not expected to open this discussion but I am glad to try to do so. I have a feeling that certainly in my experience there is one disease that Dr. Cotton has encountered less frequently than we have on the Fracture Service at the Massachusetts General Hospital, and that is specific disease. I can remember a number of cases with a negative Wassermann who, when given anti-syphilitic treatment, quickly changed and so improved, that there seemed to be no doubt that they were specific cases.

I confess to a skepticism with regard to the fixation of fractures by plates. In the femur we see more of the old cases than of the acute and we are impressed by the necessity of taking out plates and the failure of union with the use of plates. I am sure that Dr. Cotton takes out the plates after the union has occurred; but if failure comes with plates, that is a thing we must reckon with.

I agree absolutely with Dr. Cotton in regard to grafts; certainly in regard to medullary grafts and massive grafts. I have been reviewing some of the work which Dr. Michael Hoke of Atlanta has been doing in connection with the chip grafts. Even in the ununited fracture of the hip in elderly people Hoke has succeeded in getting firm union by the use of chips filling the space full of bone chips in the way Dr. Cotton suggests and then taking a ribbon graft of the osteo-periosteal type and winding the osteo-periosteal graft about the nest of chip grafts to hold them in. Union has occurred in many cases in which the outlook had been uncertain.

It is interesting to consider what Dr. Cotton said about passive congestion and diathermy. That was the thing that Hugh Owen Thomas found efficient 50 years ago, calling it damming. This was before Bier's passive hyperemia. He also employed the method of striking the bone to hasten union.

Dr. Cotton spoke of the splint for the lower leg. I quite agree that a very efficient splint may be furnished by utilizing the flare of the tuberosities of the tibia for counter pressure and the sole plates which Dr. Cotton suggested. I have found such splints inefficient unless the upper calf band is most carefully moulded. It must be made of waxed leather and shaped to the flare of the tibia so that you obtain a point of weight bearing in the region where you have bony prominences. We have used the Delbet plaster which is put on for the same purpose and gets two points of weight-bearing pressure by a process which seems like lifting yourself by your own boot straps. Both the flare of the tibial tuberosities and the flare of the malleoli are utilized. It is sufficient if the plaster is applied close to the skin with no padding. Kernan of Montreal has shown beautiful results by the use of this form of plaster.

Dr. Frederic J. Cotton, Boston (closing): Only a word in regard to what Dr. Osgood has said: I always take out the plates afterwards.

My point is not for holding with plates in femur fractures, but where you have a large amount of overlapping and non-union I don't think you can hold them any way except by plates. Plates do not help repair, they hinder it, but you have got to have the fragments in apposition and take time before you can get them to begin to repair.

As to apparatus—applying apparatus has got to be done very accurately if you are going to take advantage of their use; you have got to have absolute fixation.

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# REPORT OF THE COMMITTEE ON TRAUMATIC HERNIA

At the annual meeting of the New England Surgical Society, held October 18 at Boston, the special committee appointed last year at Burlington to consider the status of traumatic hernia presented its report. By vote of the members present, the report was accepted and the recommendations contained therein were adopted. It was further stipulated that the recorder should forward to each member of the Society a copy of the report.

Walter G. Phippen, *Recorder.*

## The Report

We feel that the present-day attitude of making someone, other than the disabled individual, pay for disabilities for which no one is responsible, has been carried rather farther in the case of hernia than with most other alleged injuries.

The consensus of surgical opinion points very definitely to the conclusion that hernia as the result of a single injury or strain is of extreme rarity.

In view of the chaotic state of opinion respecting the etiology of hernia which obtains not only with the laity, but with a considerable proportion of the profession as well as with courts and compensation boards, it seems wise to lay down certain criteria for determining what constitutes true traumatic hernia. We believe these to be essentially as follows:

1. Immediate descent of the hernia following the alleged cause, be it injury or strain.
2. Severe pain in the hernial region.
3. Marked prostration.
4. Symptoms of such severity that the individual calls attention to his condition within the first twenty-four hours.
5. No previously existing hernia at present site.
6. Trauma or strain must be adequate.

Where two or more of these criteria are lacking the case cannot be justly maintained to be one of traumatic origin. Where three or more are present, the question of a pre-existent peritoneal pouch is immaterial.

Whether or not hernia in the main is or is not a disease of occupation and therefore compensable on economic or humanitarian grounds does not come within the realms of this discussion.

We, therefore, report that in our opinion this society should place itself on record as subscribing to the following:

1. True traumatic hernia is extremely rare, that is, most hernias are of very gradual development.
2. An individual presenting a claim for hernia in order to have his claim upheld must be able to furnish proof of having had at least four of the six criteria above laid down.
3. All other cases may be classed as disease either of congenital or occupational origin and are not the results of an individual injury or strain.

Dr. Robert J. Graves, *Chairman.*
Dr. Homer Gage,
Dr. Fred J. Cotton,
Dr. Halbert G. Stetson,
Dr. Arthur T. Jones.

# Address

## J. S. STONE, M.D., BOSTON*

At this hour the Boston University School of Medicine is celebrating its fiftieth anniversary by holding an educational conference at the Copley-Plaza Hotel dealing with the "Service of the School of Medicine to the Community, Especially with Reference to the Public Health."

Within the last few weeks there have appeared in the daily press the appeals for support for the Society of Friends of Medical Progress. The honorary president is Charles William Eliot; among the honorary vice-presidents is Charles Evans Hughes. The aim of the society is to "encourage and aid all research and humane experimentation for the advancement of medical science, to inform the public of the truth concerning the value of scientific medicine to humanity and to resist the efforts of the ignorant or fanatical persons urging legislation dangerous to the health and well being of the American people."

These two events are most heartening and significant,—of greater immediate significance than will be the dedication in about a fortnight of the magnificent Thorndike Memorial for medical research at the Boston City Hospital. Great results may be expected from this step in advance at the City Hospital, but the benefits it will confer depend absolutely upon the diffusion of the work it does among the people.

Two years ago at this meeting the work of the Committee on Legislation was discussed. Four main topics were under consideration at that time,—vaccination, pre-medical education, physical education in the schools and maternity aid.

Today the situation is very different. The work which has been done for many years by Dr. Gay, Dr. Bowers, Dr. Woodward, Dr. Worcester, and last but not least by Dr. Bartol and Dr. Bigelow, is bringing results.

The anti-vaccinationists and anti-vivisectionists are always with us, but now we have the militant aid of an organized body of laymen. We must continue to do our share in aiding in popular education.

Physical training, physical examination, and nursing supervision of school children are now established. Organizations of laymen took an important part in bringing these about. We should see to it that sane methods are employed and useful results accomplished.

A step forward has been taken in this State in the matter of pre-medical education and also in establishing practical clinical examinations, thanks to the Committee on Medical Education and the Board of Registration. This year the effort is to be made to strengthen the hands of the Board. Largely through the efforts of Dr. Harvey the Board was established nearly thirty years ago. At that time it was provided that no teacher in any medical school could be a member of the Board, and that of the seven members not more than three were to belong to any one Medical Society. The law practically provided for one eclectic, three homeopaths, and three members of the Massachusetts Medical Society. The Eclectic Society has practically become extinct. An osteopath was substituted at a time when it seemed possible that a separate board of osteopathic examiners might be established. Today so many members of the Massachusetts Homeopathic Medical Society have joined the Massachusetts Medical Society that the Governor in the selection of members is much hampered, especially when the teachers of medicine who are best fitted for the duties are excluded. The Committee will this year attempt to secure the removal of restrictions upon membership in the board. We must expect opposition from the cults and from the representatives of the poorer medical schools.

Maternity aid will doubtless come up again, if in no other manner, probably by the efforts of Miss Spencer. The Sheppard-Towner Act has been accepted by a large majority of the States. The attempt of this State to test the Constitutionality of the law failed. Massachusetts pays far more than she can receive under the law, and she prefers in a matter of this sort to manage her own affairs without direction from Washington. The question, however, has become in part an economic one. We are now taxed for the benefit of other States. This will continue. Shall we try to get some return? The establishment of the Section on Obstetrics and Gynecology in the Massachusetts Medical Society, under the presidency of Dr. Mongan, is now taking the leadership in matters of obstetrics, and, as he stated at the last meeting of the Council, this section with a permanent secretary in headquarters at the Boston Lying-In Hospital, will endeavor in every way to study the causes of and cut down maternal and infant mortality and morbidity. These aspects of the question will be well cared for, now the Society has taken its stand definitely for better obstetrics. The legislative question in this field now is whether educational work can better be carried on by our State Department of Health and our local boards alone, or with the aid of the Bureau in Washington. There is the fundamental question of the advisability of submitting to this bureaucratic control from Washington.

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*Read before the joint meeting of the Hampden, Hampshire, Berkshire and Franklin District Medical Societies, Oct. 26, 1923.

What are the other problems which may arise this year? The cults, particularly the chiropractors, may at any time concentrate their efforts for recognition in this State. Every cult which has had any important following during the last century may be regarded as a protest with a measure of justification against some sin of omission or commission of the medical profession. Homeopathy helped to teach us the evils of over-drugging. Christian Science emphasized the importance of the mental attitude in functional diseases. Osteopathy and chiropractic have their followers because people who lead sedentary lives are benefited by being stirred up and exercised, and because patients feel better if some definite thing is done for them. Is the public wholly to blame if they are misled by the crude theories of pathology placed before them, if the regular profession takes no steps to instruct them in the known elementary truths of scientific medicine? *Hygiea*, the new publication, is a tremendous step forward, but it cannot reach the people in the same way in which they can be reached individually by the family physician. The absolutely fraudulent cults will come and go quickly. The Abrams fraud will have no more effect than did the Perkins magnetic tractors.

There are two matters, however, which we must not forget. With all the advances of medical science we must see to it that these advances are made available and of use to the public and at a cost which the public can meet. This is a matter our medical schools must recognize.

The training of nurses and of attendants or of nurses of different grades is also a matter which must soon be considered. Nurses are entitled to be paid generously for their services but the training for that service must not be so elaborate as to make the cost prohibitive. No woman ought to go into nursing who is not ready to devote everything absolutely without thought of self to the welfare of the patient whenever the occasion arises. Certainly today that spirit of service is far from universal.

The regulation of hospitals is a matter which has been brought up and will be brought up again. Unless the medical profession can through the College of Surgeons or in some way be certain that the conditions in hospitals are satisfactory for the safety and welfare of all the patients, we cannot reasonably object to control and supervision by the State or local health authorities.

The situation regarding Industrial Accident Insurance is not satisfactory. The law was passed without aid from the medical profession. It has been improved, but is still extremely defective. Hardly any physicians, however, would go back to the former situation. The greatest defect in the law is the limitation of pay for professional services to two weeks, unless in "exceptional cases." We should not be satisfied until we are paid for such services as will provide the recovery of the patient and his restoration to a useful occupation when this is possible. At present the law applies only to industrial accidents. Should it not be made to apply to industrial diseases also? We must work for these provisions. Obviously the insurance companies will have to adjust their rates if new conditions arise. And equally certainly measures must be adopted to prevent malingering. Is it too much to suggest that reasonable regulations may have to be established regarding the quality of and recompense for professional services?

There is one other matter of importance from a selfish viewpoint, and which may in some form come up as a matter for legislation. A couple of years ago a time limit of two years was established within which suits for malpractice must be initiated. In some manner or other blackmail suits must be checked. We have no right to expect to be immune from legal action if we do not exercise all reasonable care in the treatment of our patients, but we have a right to feel secure against the suit for $5000 damages in the hope that we may pay $50 of hush money.

The Society is doing much through its defense of members. The insurance of members at a reasonable rate is now accomplished. New methods of fighting blackmail must be adopted.

The introduction of insulin has made a great number of diabetics innocent breakers of the law forbidding the possession of hypodermic syringes and needles. In some way provision must be made whereby these sufferers may lawfully maintain their treatment. But at the same time we must help to prevent the improper use of narcotics, which District Attorney O'Brien regards as such an important factor in leading to the commission of crimes.

In all that has been accomplished and in all that we hope to see accomplished we have only one effective weapon,—education of the public in the fundamental truths of medical science. We can wield this weapon effectively only if through the service we render, the public will listen to us with sympathetic attention. Our power depends upon our standing in the communities in which we work and upon the training for useful service which is given our successors.

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## Original Articles

# ALTERATIONS IN LIVER FUNCTION AND IN THE EXTERNAL SECRETORY ACTIVITY OF THE PANCREAS IN DIABETES MELLITUS: A PRELIMINARY REPORT*

BY CHESTER M. JONES, M.D., BOSTON

[From the Medical Services of the Massachusetts General Hospital and the New England Deaconess Hospital.]

The recent brilliant work of Banting and his collaborators in the production and use of insulin has given a new stimulus to the study of diabetes, both as to therapeusis and as regards the fundamental alterations in the body chemistry and physiology in that disease. The question of the actual causes of diabetes is being again discussed and previous conceptions are being reconsidered in the light of present investigative findings. Although the striking results obtained from the use of insulin point to an alteration of the internal secretion of the pancreas as the most evident pathological change existing in diabetes mellitus, it is well known that changes in insular function are frequently not the only pathology that can be demonstrated.

Based on his findings obtained in animal experimentation, Allen[1] believed that many, if not all, cases of diabetes were fundamentally due to pancreatic disease, in which both the acinar as well as the insular cells were damaged. Clinically it is common to find, in association with an existing diabetes, such conditions as cholecystitis, cholelithiasis, hepatitis or pancreatitis. Cancer of the pancreas is occasionally accompanied by glycosuria. Hemachromatosis, with its associated diabetes, always shows marked parenchymal changes, not only in the pancreas, but in the liver as well. Glycosuria has been mentioned in association with catarrhal jaundice. Involvement of the biliary tract, therefore, is well recognized as a not infrequent concomitant of diabetes mellitus. Insulin itself is now believed to be an active principle of many of the body tissues and organs, although the islands of Langerhans are undoubtedly the main source of supply of this important substance. At autopsy not only does the pancreas frequently show histologic evidence of involvement of both acinar and island pathology, but liver changes can occasionally be recognized. Such liver changes usually consist in diminution or absence of glycogen content, and fibrosis. The common association of arteriosclerosis with diabetes is well known, although a causative relation between the sclerosis and the fibrotic changes in the pancreas has not been established.

That there is a close relationship between the liver and the pancreas in carbohydrate metabolism is unquestioned, but one can find only scattered references in the literature to any disturbance of liver function in diabetes. The recent work of Mann and Magath,[2] however, on the relation between extirpation of the liver and sugar metabolism is certainly suggestive. Furthermore, although it has long been recognized that interstitial changes in the pancreas are not uncommon in diabetics, direct statements as to a coexisting disturbance of external pancreatic secretion are few.

It is the purpose of this communication to indicate briefly the results of work that has recently been carried out on a group of diabetic patients at the Massachusetts General Hospital and the New England Deaconess Hospital with special reference to disturbances of liver and external pancreatic function. The original incentive to such studies lay in the findings made by the writer in several cases of diabetes, with associated liver and gall-bladder pathology. The purpose of the investigation has been to ascertain, if possible, the existence of important changes in liver and external pancreatic function in diabetes mellitus. The finding of such changes, it was hoped, might lead to a somewhat clearer understanding of the essential nature of the disease. Inasmuch as the work is still in progress a complete report of the findings made during this investigation will not be given at this time, and any comment on the significance of such findings will be postponed until a later date.

### CLINICAL MATERIAL

The cases under consideration include an unselected group of about seventy patients suffering from diabetes mellitus. No attempt has been made, to date, to group the patients, either by age, duration of the diabetes, or severity of the disease. The youngest patient was eleven years of age, the oldest was seventy-two. The average age was forty-four. The average duration of symptoms was two and three-quarters years. In a few patients the disease had apparently existed for only one or two months, and in several cases symptoms had been present for well over ten years. Several patients showed marked acidosis during or just prior to the examination. About a third of the patients were examined while receiving insulin therapy.

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*This paper is No. 9 of a series of studies in metabolism from the Harvard Medical School and allied hospitals. The expenses of this investigation have been defrayed in part by a grant from the Proctor Fund of the Harvard Medical School for the Study of Chronic Disease.

### TECHNIC

The technic employed in the examination of these cases consisted essentially in a detailed study of the duodenal contents for alterations in bile pigment elimination, and for changes in pancreatic enzyme activity. Duodenal contents were collected through a duodenal tube, the position of which was checked by a fluoroscope. Following the instillation of 50 c.c. of a warm thirty-three per cent. solution of magnesium sulphate into the duodenum the resulting flow of bile and pancreatic secretion was collected by siphonage for one-half hour. The patient was then given a test meal of 40 c.c. of forty per cent. cream by mouth. As soon as the cream was observed in the duodenal contents a separate fraction was collected over a period of one hour.

That portion of the duodenal contents collected following the use of magnesium sulphate was centrifuged at high speed for fifteen minutes, and the sediment examined for abnormal cellular and crystalline elements. The supernatant fluid was then examined spectroscopically to determine the presence and amounts of bilirubin, urobilin and urobilinogen, or other bile pigments. As already pointed out in previous investigations, the quantity and character of the bile pigments in the bile bear a very distinct relation to alterations in liver function. Details of the methods for pigment estimation have already been published.[3]

The second portion of duodenal contents, collected after the cream meal, was examined for pancreatic enzyme activity. The method employed was that originally described by McClure, Wetmore and Reynolds,[4] and subsequently used in studying pancreatic disease by McClure and Jones.[5] The method consists essentially in determining under properly standardized conditions, the digestive action of given amounts of duodenal contents upon standard preparations of casein, soluble starch and olive oil emulsion. Results of digestive activity were expressed in terms of milligrams of non-protein nitrogen and glucose, and cubic centimeters of titratable acidity, respectively. A sufficient number of normal controls were studied for comparison with the results obtained from the group of diabetic patients.

### RESULTS OF THE INVESTIGATION

Inasmuch as the purpose of this communication is merely that of a preliminary report, the detailed findings in the individual cases will not be given. The work is still in progress, and general figures will suffice to indicate the type of findings obtained. Out of a group of seventy diabetics, approximately fifty per cent. showed proteolytic activity that was below the minimum normal level as established by McClure. Thirty per cent. showed protein splitting activity far below this minimum normal. Lipolytic activity was also diminished below the lowest normal figures in about fifty per cent. of the cases. About forty per cent. of the cases showed diminution below normal in both proteolytic and lipolytic activity. Fewer than ten per cent. of the total number of cases showed marked lowering of amylolytic activity.

Estimations of the bile pigments in the duodenal contents revealed the fact that in over sixty per cent. of the cases the bilirubin content of the bile was increased distinctly above the upper limit of normal. In approximately half of the cases the urobilin figures were well above the high normal findings, and over a third of the cases showed an extremely high elimination of urobilinogen.

In about ten per cent. of the cases the duodenal contents showed a sediment that was very suggestive of gallstone formation.

The exact significance of the above findings, the relation between such apparent alterations in hepatic and pancreatic function and proper digestion and utilization of food, the effect of insulin on such pathological findings, and other obvious considerations will be discussed in detail in a later report.

I wish to acknowledge my indebtedness to Dr. William Castle and Dr. Henry Mulholland for their valuable assistance in carrying on much of the actual work of the investigation. The opportunity for studying a large number of patients at the New England Deaconess Hospital is due to the kindness of Dr. Elliott Joslin and his assistants, to whom I am deeply grateful.

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## SPECIAL NOTICE

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# THE EARLY HISTORY OF THE RUTLAND SANATORIUM*

BY VINCENT Y. BOWDITCH, M.D., BOSTON

*Medical Director of the Sharon Sanatorium, Sharon, Mass.; formerly Attending Physician of the Rutland State Sanatorium*

*Ladies and Gentlemen:*

It is with curiously mixed emotions that I appear before you today to celebrate the twenty-fifth anniversary of the opening of this great institution in which I have had such a deep interest ever since its beginning, more than a quarter of a century ago. I deem it a great privilege to be here to tell you of my earlier experiences, even though the thought of the rapid flight of time must have a sobering effect when one reflects how large a portion of his life has passed rapidly by, and knows that the coming years will be no less fleeting as he approaches the inevitable goal. It is with deepest satisfaction, however, that I am privileged to tell you something of the early history of the institution, and if I am obliged to repeat much that I have said on previous occasions, at the expense of the patience of some of my audience, I trust that what I say may be of use to those who come after me, who have not had the experience of years to guide them in their work.

Several years before this sanatorium was opened, Representative James J. Gallivan of Boston, a humanitarian who knew the need of hospital care for indigent consumptives, was deeply interested in a bill before the Massachusetts Legislature, and diligently worked for the establishment of a suitable state hospital for these cases. The bill, after changes, was finally passed in 1895 by the legislature, and a Board of Trustees was appointed, comprised of the following gentlemen: Alfred Worcester, M.D., of Waltham; John C. Hammond, A. W. Esleeck, W. E. Parkhurst, Fred B. Percy, M.D. For several years Dr. Worcester had been deeply interested in the work for the treatment of early cases of pulmonary tuberculosis as carried on at the Sharon Sanatorium at Sharon, Mass., which was an experiment in which I had endeavored to show what I and my father before me had long believed, *viz.*, that many patients with beginning signs of pulmonary tuberculosis could be successfully treated near their homes, even in our own changeable and trying climate, and that it was not always necessary to send them to high altitudes far from the sea, and to distant health resorts in order to regain their health. The Sharon Sanatorium, at an altitude of only 250 feet, eleven miles from the Atlantic coast, the first of its kind in New England, was opened in February, 1891, 33 years ago, nearly eight years before this institution received patients, and five years after the late beloved Dr. Edward L. Trudeau had opened the Adirondack Cottage Sanitarium at Saranac Lake, N. Y.

It is an especial pleasure, as well as a duty, for me to tell of Doctor Worcester's earnest endeavor, in consequence of his observance of the success of the experiment at Sharon, to change the character of the proposed institution at Rutland from that of a mere reception hospital for the care of the very sick, to a sanatorium where very poor people who were showing symptoms of tuberculosis could be placed and restored to health.† To him we owe the fact that the whole Board of Trustees heartily endorsed the idea. It was a matter of deepest regret, therefore, to all connected with the institution that Dr. Worcester felt obliged to resign his position upon the Board almost immediately after he had succeeded in arranging the plans for the management of the new sanatorium. Had it not been for him, the Rutland Sanatorium, as such, might never have been begun, and would never have acted as an example to other States in the Union to do likewise. After a canvass among the physicians of the State in order to get an opinion as to the best location for a sanatorium, the Trustees wisely decided that the hills of central Massachusetts would be the most favorable position because of its comparative accessibility from all parts of the State, although one-fifth of the replies to the questions sent out favored Sharon as the one to be selected. After mature deliberation, the town of Rutland was chosen as offering special advantages for the work. The moderate altitude of 1100 feet, a position sheltered by woods from the coldest winds, a fine water supply near at hand, and the location in the central part of the State, were features which rendered the selection of Rutland a good one. Plans in accordance with the latest methods of treating tuberculosis were studied with great care by the Trustees and their architect, and the work was begun.

At first the cumbersome name, "The Massachusetts Hospital for Consumptives and Tubercular Patients," was adopted, but two years later, in accordance with the previous change of policy of the Trustees, it was called "The Massachusetts State Sanatorium at Rutland."

The proof of the success of this undertaking lies in the fact that visitors from other States who had heard of it soon began to come to Rutland, with the result that the movement made rapid progress throughout our country. I think I am correct in saying that now no State exists in which there is not some institution of the kind within its borders, and the number of private and public institutions has become rapidly much larger throughout our land. It is a significant fact, moreover, that Massachusetts has now three additional state sanatoria built a few years later, situated in different parts of the Commonwealth, *viz.*, at North Reading, Lakeville, and Westfield, all of them being children, as it were, of the parent State institution at Rutland, the methods of treatment being practically the same as those previously carried out at Saranac Lake and Sharon.

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*Read at the twenty-fifth anniversary meeting of the Rutland State Sanatorium, and eighth annual meeting of the New England Tuberculosis Conference, September 13, 1923.

†*Vide* Second Annual Report of Trustees of the Massachusetts Hospital for Consumptives and Tubercular Patients, October, 1898, p. 5. Public Document No. 61.

Having been honored by the Trustees in my election as Attending Physician to the sanatorium, I made by first visit to Rutland in the summer of 1897, fourteen months previous to the formal opening of the institution, and under conditions of such picturesque and noteworthy nature that I deem them worthy of record. With two or three members of the Board of Trustees and the architect, I arrived by train at Rutland late in the afternoon, during a furious August storm of rain and thunder, which made necessary the postponement of our visit to the sanatorium until an early hour the next morning. That night is indelibly fixed upon my memory. I had a specimen of the fury of a southerly gale in the hills of central Massachusetts, exposed as they are to the four winds of heaven. Flashes of lightning, crashing of thunder, rushing of water, and banging of blinds on the windows of the little inn where we passed the night, gave little opportunity for sleep, but at a very early hour, not long after dawn, because of the fact that we were obliged to take a morning train back to Boston, we entered in the gloom a large, long, black-covered wagon, irreverently nicknamed by the townspeople "The Sanatorium Trustees' hearse," and were driven to the sanatorium through the wind and rain which still persisted, by our excellent guide, Mr. Peter O'Connor, the factotum of the village at that time, who showed his infinite amusement at the idea of the Trustees making a visit at such an hour and under such conditions by sudden guffaws of laughter on the way. Arrived at the sanatorium, the absurdity of the situation came over me. The appearance of the large building and its surroundings was strangely at variance with our ideas of the absolute necessity of dryness of soil in any attempt to cope with tuberculosis. Not only was the ground everywhere covered with pools of water, but the gale having knocked in the cloth-covered window-frames, the floors of the wards were covered with water. I have still a vivid picture of the architect leading us with the corner of a brown shawl over his head, the rest of the garment bedraggled and trailing on the floor, giving him the appearance more of an Indian squaw than of a man, the Trustees and I following in a rather dismal procession. Truly a strange beginning to what was to prove a most important enterprise, and not at all a correct harbinger of subsequent events. A thorough examination of the then unfinished buildings soon convinced the visitors, however, of the importance of this experiment by the State, and enthusiasm, even under such adverse circumstances, replaced the earlier spirit of depression.

The following year was one of much discouragement to the Trustees, who had striven earnestly, only to meet apparently inevitable legislative delays which hampered their work. Finally, however, on September 23 of the following year (1898), the sanatorium was formally and impressively opened by Governor Roger Wolcott, who gave the occasion a dignity which influenced the whole subsequent work of those who were connected with the institution. That day was a marked contrast to the one on which I made my first visit. The weather was glorious, with the sun shining, the whole institution having an atmosphere of light and cheer, the faces of all present showing enthusiasm and hope for the new work before them. Thus began a movement which I think it is not too much to say marked an epoch in the crusade by the general public against tuberculosis.

In the beginning, it became the duty of my colleague, Dr. Herbert C. Clapp of Boston, who represented the homoeopathic department, and myself, to examine all applicants for admission, and a small office was opened for this purpose in Boston. During the early years this plan was adhered to with the idea that the rule of admitting, as far as it was possible to determine, only the early really hopeful cases for treatment, must be adopted. This was an absolute necessity, and the custom was rigidly followed by us because of the importance of proving what could be done to arrest tubercular disease in properly selected cases. Had we relaxed our efforts in this direction, it would have been well-nigh impossible to accomplish satisfactory results. We could easily have filled our beds with far-advanced cases for which there was little to be done other than to alleviate suffering up to the inevitable end. The difficulty of adhering to this can easily be imagined by those who have had to do with similar institutions of semi-political nature, in which pressure has often been brought to bear in the endeavor to favor the interests of friends and relatives. In spite of this handicap and that of attempting to control a large number of ambulant cases, not accustomed to discipline, with an insufficient number of assistants, favorable results began to appear after a number of months, and public attention became riveted upon this new plan for meeting the tuberculosis question in our midst.

The fact should be noted here that in the first years of my service, with usually at least one hundred patients to be attended to, I had but one assistant who was obliged to control the treatment of those in my department with the excellent assistance of the nurses, of course, without whom it would have been impossible to keep adequate supervision. In the latter part of my service, with the number decidedly increased, I had an additional assistant, and to the efficient aid of these two gentlemen is due a large part of whatever success we attained.

The work proceeded well, on the whole, but we soon had to meet with difficulties due to injudicious friends. The press, with laudable intent, but over-zealous, began to give exaggerated accounts of beneficial results. In spite of the protest of those in charge who knew better, ridiculous claims of "cures" were often made simply from the vastly improved appearance and subsidence of symptoms in the patients, with the inevitable result of often subsequent disappointment of patients and their friends when, under ordinary conditions of life, relapses occurred. In consequence, those in charge of the sanatorium were obliged to witness an outside attitude of prejudice as foolish as the previous unwarranted and exaggerated enthusiasm. Fortunately, this phase passed, and in the later history of the sanatorium a rational and sensible attitude took its place in the public mind. At this point it should be said, all statements to the contrary notwithstanding, that never under any conditions in my own experience has the term "cured" been used by myself or those associated with me in any case upon graduation from either Sharon or Rutland, even with entire disappearance of all active symptoms, and no matter how favorable the outlook for the patient. The term "arrest of disease" was adhered to for years until, in accordance with the rules adopted by the American Sanatorium Association, a certain latitude of expression, such as "apparently cured" was decided upon, but even that was dropped in later years, and the still more conservative terms, "apparently arrested" or "arrested," dependent upon length of time, substituted. After a limited number of years under ordinary conditions of life, when the patient has remained in an apparently normal condition of health, I believe that the term "cured" may be legitimately used.

In this position I have reason to believe that every physician who comes into intimate contact with this class of work agrees with me as to the wisdom of this conservative attitude, which was maintained at Sharon and Rutland from the outset. Hundreds of former patients at these places, who left the institutions years ago, are now alive and apparently perfectly well, and living in or near our great cities, and carrying on healthful occupations—useful members of society, who had they not had the benefit of sanatorium instruction would doubtless in a great majority of cases have succumbed to the disease. Such cases can be with justice therefore spoken of as "cured."

In speaking of the methods of treatment carried out during my service from 1898 to 1906 at Rutland, I can only say that they were chiefly such as are still advocated in all well-regulated sanatoria, *viz.,* life in the open air as far as possible, both day and night, hours of absolute rest, proper feeding, regulation of exercise, and an endeavor to create an atmosphere of cheer and hope among the patients, the last-named being among the most important of all. As to special methods of treatment which from time to time have been brought to the attention of the profession, little was done. Tuberculin was not given at that time to any marked degree, although later at Sharon I was led to believe that in certain striking instances it was of marked benefit, and its use is still continued in selected cases. Artificial pneumothorax at that time had not obtained the popularity it did in later years, and was not resorted to at all during my service of seven and a half years, although subsequently at Sharon it was adopted with varying results, and in certain cases with apparent marked success as far as amelioration of some of the most distressing symptoms were concerned, to say the least.

The larger the institution, the more difficult necessary supervision becomes, this being one of the chief obstacles to success at Rutland; and it is often surprising to me to see, hampered as we were by lack of assistants, how much we could accomplish, once having gained the confidence and co-operation of the patients themselves.

The "cost per capita," that bugbear of the physician who is endeavoring to give the best to his patients, thereby avoiding the pitfall of the "penny wise, pound foolish" principle, was one large factor which militated against success. Legislators, whether from conscientious motives or from a desire to attract attention, were prone to criticize what were believed by us to be necessary expenditures to obtain the best results. The cry "enlarge your institution in order to reduce the cost per capita" ~~was a the~~ory I continually opposed, conscious as I was of the danger of defeating the very purpose we had in view by making the sanatorium elephantine in size, thus diminishing the possibility of proper supervision of patients, a factor which is of almost greater importance in tuberculosis than any other disease, if favorable results are to be attained. When the sanatorium opened there were 175 beds, which were in later years increased to the number of nearly four hundred, a fact which brings much too heavy a burden upon any staff of medical assistants in their desire to accomplsh the best results. It is surprising, therefore, and reflects all the greater credit on those who are now in charge of the work, that they have accomplished so much under adverse conditions.

It may be asked what my attitude is as to the comparative value of sanatorium treatment. I can say this,—that after an experience of over thirty years in sanatorium work at Sharon, and six years' observation of patients in the early life of the Rutland Sanatorium, I consider myself more than fortunate in being able to recall vividly the hopelessness existing in former years when, as a young physician and before that, I saw many a case of beginning tuberculosis for whom there seemed to be nothing but the prospect of a more or less slow decline; and when the thought of attempting to cure such cases in a climate like that of New England was considered chimerical and a practical impossibility. I cannot paint in too vivid colors the contrast in the minds of physicians and the laity between the sense of utter despair and hopelessness as to the outcome of beginning pulmonary tuberculosis over a quarter of a century ago, and now, when the former feeling is replaced by the inspiring hope that, taken at a favorable time, the chances of complete recovery near our homes and under proper supervision, with time and patience, are great. Scores of letters received from time to time from former patients now well are far more convincing to me than any tables of statistics could possibly be. Such testimonials are to me of infinite worth in judging of the usefulness of sanatorium treatment.

Small wonder, then, that when I occasionally hear doubts expressed by those who, younger than myself, have attempted with excellent intent to question by statistics the wisdom of spending money for sanatoria because they have failed to completely stamp out tuberculosis (a claim never made or thought possible)—small wonder, then, I say, that no tables of statistics, with their inevitable tendency often to mislead, could ever swerve me from my opinion that every dollar spent for the maintenance of sanatoria, even though possibly at times unwisely, has been more than worth while as a means of education alone, and inasmuch as it has given a tremendous impetus to the movement, now broadcast, to use every possible method in the prevention of the disease which has hitherto decimated our population. It is vastly encouraging, moreover, to find that not only physicians but social workers have evidenced their belief in the efficacy and necessity of sanatorium treatment by papers such as that published in 1914 in the Boston Medical and Surgical Journal by Miss Gertrude Farmer and other observers who give the results of their investigations, with the expressed opinion that sanatoria have been and still are of vital importance in the tuberculosis campaign.*

The memory of those early years is one filled with thoughts of all the doubts, misgivings, and discouragements in the minds of all those who were connected with the institution which must accompany the testing of any great experiment. The recollection, however, of many happy and interesting days and months spent with those who were all working in the same direction, the pleasure of watching the steady progress towards health of many a patient whose life had been threatened, the study of each individual case in its physical and psychical aspects—in short, the study of human nature as seen in those under one's care, far outweighed the factors which tended to depress; and the final evidence that the experiment was being approved and followed by others was in itself enough to give a great sense of satisfaction, more than compensating for any previous anxiety or question of possible failure. Whatever the result in after years to the patient, it showed what could be done to arrest disease, and taught us the paramount importance of prevention of disease. It also showed us the necessity of adhering as far as possible to the same general attention to the hygienic surroundings of those who left the institution—a fact which should be constantly kept in mind now and emphasizes the necessity of "follow-up" work which, although admirably done by certain individual workers, has not yet attained the thoroughness and widespread effort that is absolutely necessary for the well-being of discharged patients who may easily slip into careless methods of life, or seek occupations which are unfavorable to health.

I have thus briefly given you, Ladies and Gentlemen, an idea of the origin and growth of the Rutland Sanatorium. Of necessity it has been a more or less superficial view, but I trust it may be of service. I cannot leave the subject without referring gratefully to those with whom I was especally connected during my service. It is a source of gratification to feel that the three physicians with whom I came especially in contact in my work—Dr. Walter J. Marcley, the former Superintendent, and my two assistants, Dr. Henry B. Dunham and Dr. Bayard T. Crane—have all held in later years honorable positions as superintendents of sanatoria or in other forms of tuberculosis work, thus doing their active and efficient part in spreading the knowledge of what may be done to lessen the ravages of this disease. To Miss Mary E. Thrasher, the former matron and superintendent of nurses, and to the corps of nurses who gave us such efficient service, I desire to express my gratitude for their devotion to the cause in which we were all so deeply interested.

The day may yet appear when some specific may be found which will vastly lessen the labor now expended in the cure of tuberculosis, and some form of immunzation may yet be discovered, but until that time let us spare no effort in grappling with the disease by every means in our power. Certainly we have reason to be proud of what Massachusetts has thus far accomplished.

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*Boston Medical and Surgical Journal, 1914, Vol. 170, pp. 411-421: "Is Sanatorium Treatment Worth While?"

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# TUBERCULOSIS RESEARCH IN STATE TUBERCULOSIS SANATORIA*

BY STEPHEN J. MAHER, M.D., NEW HAVEN, CONN.

*Chairman, Connecticut State Tuberculosis Commission*

"Why all this talk about tuberculosis research?"

"What do you mean by tuberculosis research?"

"Doesn't every physician who studies his patients do tuberculosis research?"

These questions are frequently asked by our cynical friends. It will be my purpose this morning to answer the first question. The Standard dictionary answers the other two when it describes scientific research as "a systematic investigation of some phenomenon or series of phenomena by the experimental method."

In many, perhaps in most large sanatoria, the members of the medical staff meet once a week and report to one another and to their chief, the observations that they have made as to the condition and treatment of the patients assigned to them. This, of course, is a highly commendable procedure but it is not research work. It is not "a systematic investigation of some phenomenon or series of phenomena by the experimental method." It is conceivable that these weekly consultations by the medical staff of a sanatorium might develop a problem which would appeal immediately to part of the staff, as a promising subject for research. The systematic investigation and experiments done by them in answer to this appeal would be research work.

Suppose, for instance, that at one of these weekly meetings, Member A of the staff makes the interesting report that Mrs. Heidelberg, an active second-stage case of pulmonary tuberculosis in Ward 5, who was stricken six weeks ago with severe erysipelas of face and trunk, has now recovered not only from her erysipelas but also from her tuberculosis, Members B and C of the medical staff, if they are of the right sort, will realize that here is a hint from nature that ought to be followed up, and they will endeavor to learn what effect the sera and the bacterial flora of cases of erysipelas have on experimental tuberculosis and on the tubercle bacillus. They know that if they can learn just how nature cured that special consumptive with that special case of erysipelas, they will do more good to humanity than has been done by any two men who have walked the earth for many centuries. If some of you present here this morning are unfamiliar with the ordinary atmosphere of ordinary sanatoria, you may suppose that not only would Doctors B and C of that santorium staff immediately follow up such a hint from nature, but that also Doctors A and D and E and F and all other doctors of the alphabet would do likewise. Your supposition would have no foundation in fact. And even Doctors C and B would meet with more ridicule than encouragement from the doctors of their acquaintance. They would be strongly advised to mind their own business and let research alone.

"Why?" you ask in surprise. "Why? What objections can there be to the doing of tuberculosis research by these sanatorium physicians?"

### OBJECTION TO SANATORIUM RESEARCH

Let me enumerate a few of the objections that can be made, and that are made to the doing of research work in tuberculosis sanatoria:

Objection 1.—The physicians of sanatoria have so much routine work to do—their ordinary sanatorium duties are so many—that they have no time to give to anything else.

Objection 2.—The type of doctor capable of conducting a sanatorium is not the type of doctor capable of doing laboratory work.

Objection 3.—The sanatorium physician who gives time and thought to the solution of a laboratory problem neglects his sanatorium patients.

Objection 4.—The State cannot afford to pay, and does not pay its sanatoria physicians for research work. The State pays its sanatoria physicians a fixed salary with the understanding, expressed or implied, that the sanatoria physicians, in return for this salary, will devote their whole time to the care of the tuberculous men, women and children that the State sends to their sanatoria.

Objection 5.—The only man capable of doing worth-while research in tuberculosis is the man who knows all that has been done by all the investigators who have preceded him, and who has read the thousands of volumes in the various languages of the world, that tell of the vain efforts that science has made, lo, these many centuries, to find a cure or prevention of tuberculosis. Such a man belongs in a Rockefeller Institute, or in a governmental laboratory, not in an institution established by a State to care for its tuberculous sick.

Objection 6.—To do worth-while research work in tuberculosis it will be necessary to have special and costly laboratory buildings, and special and costly equipment at all the state sanatoria. The taxpayers of the various States are now so heavily burdened that it is not fair to put on them the heavy expense of such costly buildings and such costly equipment. Only the great philanthropic foundations of the country are able to build and equip such laboratory buildings.

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*A paper read at the Eighth Annual New England Tuberculosis Conference and Celebration of the 25th Anniversary of the Founding of the Rutland State Sanatorium, at Rutland, Mass., on Thursday, September 13, 1923.

Objection 7.—Research work in tuberculosis is unnecessary. We know all we need to know about tuberculosis. Our duty now is to thoroughly apply the knowledge that we have. Even by applying our knowledge imperfectly and half-heartedly, we have cut down the death rate from tuberculosis more than 50 per cent. in the last fifty years. If, instead of spending time and money on tuberculosis research, we would spend our time and money in cleaning up the slums of our cities and in educating our foreign born, we would make much more progress in our effort to drive tuberculosis out of New England and out of America.

### ADVOCATES OF SANATORIUM RESEARCH

After hearing these seven serious objections, does anybody dare to advocate the carrying on of tuberculosis research in tuberculosis sanatoria?

Yes, I dare. And I hope most of my hearers dare. I appear here this morning not merely to defend the doing of research work in tuberculosis sanatoria, but to endeavor to persuade you that the tuberculosis sanatorium that is not trying, and trying hard, to increase the world's knowledge of tuberculosis, is not living up to its opportunities, is not playing fair with the public, and is in sore need of a new spirit. I do not mean to insinuate that we of Connecticut are alone in our advocacy of tuberculosis research in tuberculosis sanatoria. Nobody has been a more eloquent and effective advocate of the cause than the present beloved leader of your Massachusetts anti-tuberculosis campaign, Dr. Edward O. Otis of Boston. The National Tuberculosis Association has, for years, been urging research as a necessary part of our campaign against our arch enemy. In the great municipal Sanatorium of Chicago, very special attention has for years been paid to research. Notable research work has been done in the Colorado and New Mexico Sanatoria, and in several of the Jewish sanatoria of the country, and, of course, the research work of Trudeau and Baldwin did more than the evergreens or the snows of the surrounding mountains, to make Saranac a tuberculosis shrine.

### IS THE SANATORIUM PHYSICIAN A DRUDGE?

Some of my audience are probably saying to themselves. "Yes, that's all interesting enough; but how about those seven formidable objections to the doing of research work at tuberculosis sanatoria. Isn't he trying to sidestep them?"

No, I am not trying to sidestep them. They are so easily knocked out that it's almost a shame to hit them. Take the first three objections—the sanatorium physician is overwhelmed with routine duties and has no time for research; the capable sanatorium physician cannot be a capable research worker; the sanatorium physician who becomes interested in research neglects his patients. Not one of these statements is true, because first, the sanatorium physician has at his beck and call nurses, orderlies, technicians and assistants, in wards and offices, to do the rough work of his institution, and, the more capable the sanatorium physician is, the more capable are his subordinates, and the more time and opportunity has he to lift his eyes and his thoughts from the counting of pulses, or the measuring of calories, to scan the scientific horizon and to study the scientific sky.

The sanatorium physician who is overwhelmed with routine is not a capable sanatorium physician. He is merely a clerk. A sanatorium physician, like every other physician, is a doctor. A doctor is a teacher, not a clerk. The sanatorium that functions smoothly only when the sanatorium physician watches it, the sanatorium the discipline of whose wards and kitchen and nurses' home, breaks down when the medical superintendent goes on a vacation, or on a wedding journey, or attends a medical meeting, or even a World's Series, that sanatorium needs a new medical superintendent and a new medical staff. But, as a matter of fact, there is no other institution that responds so well to wisely imposed regulations as does a state tuberculosis sanatorium. Ninety-nine out of every hundred inmates are making serious fights for their lives, and they are amenable, as the inmates of no other institution are, to the kindness and the commands of the officers of the institution. In no other institution can the inmates be so easily made to realize that conformity with the rules by everybody is to the advantage of everybody, and that infractions of discipline, by even a few of the patients, are harmful to all of the patients.

Oh, yes, I know that occasionally patients make unreasonable protests about the food and other things, but, except in rare instances, a tactful head nurse or housekeeper can handle that matter, at least as well as the medical superintendent or his assistant physicians.

It is not true, therefore, that the capable sanatorium physician is overwhelmed with routine duties. He has much more time to give to his library, his laboratory, his golf and his family, than have his classmates engaged in the private practice of medicine.

Again, the first requisite for a successful research worker is that he be deeply interested in his subject. The tuberculosis sanatorium physician has shown that he is interested in his subject. If he were not interested, and deeply interested, he would not have become a tuberculosis physician, and the State would not have appointed him to the responsible position in the tuberculosis sanatorium that he now holds. Other requirements for a successful research worker are a healthy skepticism of the generally accepted, and a persistent desire to know the why of things. The tuberculosis physician of even a very modest mental equipment must become skeptical and curious whenever he takes a tuberculous patient's history, reads a tuberculosis text-book, or signs a tuberculosis death certificate.

And, as to the suggestion that the doing of research work makes a sanatorium physician neglect his patients, nothing could be further from the truth. It has been our experience in Connecticut, and the experience whenever sanatorium research work has been seriously attempted, that the patients not only receive closer and more sympathetic attention than ever before, but that the patients, at least the better educated and the more intelligent patients, evince an intense interest in the tuberculosis problems that are under investigation, and that as a result the patients show an increased respect for their physicians, and their physicians' opinions and advice.

### THE COSTLINESS OF RESEARCH

Is it so very costly? It is not. All decent sanatoria nowadays have x-ray rooms and a small laboratory for bacteriological and chemical tests. In the sanatorium where two or three physicians are doing research, it may be necessary to spend a few dollars, or even a few hundred dollars, for an extra microscope or lens, an extra supply of films for x-ray work, a few dollars for extra glassware, and stains, and culture media, and guinea-pigs; but the total cost will be picayune if compared with ordinary overhead expense of the institution, or if compared with the enormity of the evil these few dollars are intended to combat, or with the health and wealth and happiness the successful expenditure of these few dollars would confer on all the races of men.

No, the value of a sanatorium laboratory cannot be gauged by its size, or its beauty, or the cost of its equipment. The value of a sanatorium laboratory to the sanatorium, and to the State, depends entirely on the kind of men who work therein. Given men with enthusiasm, with vision, and fired with a great longing to lift the load of suffering that tuberculosis now imposes on mankind; given, I say, such men working in the little laboratories of our state tuberculosis sanatoria, and no matter how scant may be the equipment of these laboratories, from these laboratories will come the cure of tuberculosis. In comparison with such laboratories, so manned and so equipped, Rockefeller Institutes and wealthy foundations of all kinds are hopelessly handicapped in the race for this greatest of the world's prizes. Most of these foundations and institutes have never done anything for tuberculosis research. They are too far removed from tuberculous patients. Their atmosphere is too academic. The members of their staffs are so occupied with details of classifications and of the finesse of technique that they have neither time nor energy for so commonplace a problem as tuberculosis. They cannot be blamed too much for their attitude in this matter. Nobody who does not live among the tuberculous can realize the world's supreme need of a cure or preventive of tuberculosis. Many of the able men whom these great institutes and foundations absorb, appear to lose their initiative and their touch with medical realities. They become systematized and classic and authorities. Even Koch, himself, seemed to lose momentum in proportion as the equipment of his laboratories increased, and the amount of his field work diminished.

On the other hand, every week of every year, the physicians of the sanatoria see nature cure some unfavorable cases and often fail to cure apparently favorable cases. Every intelligent sanatorium physician knows that if he can learn why it is that when subjected to the same treatment and the same environment, some patients recover and others die, he will have gone a long way on the road to victory. Nor will it be necessary for his progress that he familiarize himself with all the speculations on this subject that fill the dusty tomes of libraries. Too much knowledge of that sort is very often an encumbrance. The possessor of that sort of knowledge is interesting, even valuable sometimes, as a dictionary is interesting and valuable; but he is so weighted down with facts and figures of little importance, that he cannot move. He must stand still to preserve his balance. New ideas or a new point of view would seriously endanger his equilibrium. It is to the adventurous and confident minds, the young minds, the minds that have not too much to unlearn, that we must look for advances in the art and science of tuberculosis, as in most other arts and sciences. And where shall we get these minds if not in the heads of the physicians who have already devoted their young lives to the study and treatment of tuberculosis—in other words, the physicians of the state tuberculosis sanatoria.

### A TUBERCULOSIS CURE NOT NEEDED!

Now comes the seventh and the last objection to tuberculosis research, namely, the objection that a tuberculosis cure is not needed; that we already have the tubercle bacillus on the run, and that within a few years, by the use of our present methods and weapons we will have the tubercle bacillus killed or captured. That, of course, is arrant nonsense. Statements of that kind are possibly excusable when made by some recent convert to the anti-tuberculosis crusade, but they would not be excusable if made by a leader of that crusade. In fact, such statements are never made by a ranking officer of the crusade, the men to whose efforts the past successes of the crusade are mainly due. Such statements are not made by general practitioners of the country nor by the medical officers of state tuberculosis sanatoria, the men who, in spite of their best endeavors, in spite of their utilization of all the methods and weapons at their command, watch with an agony that is almost despair, when so many of their patients slip and slide, further every week, down the melancholy way that ends in the cemetery. These men have no illusions on the subject of the conquest of the tubercle bacillus. They realize, of course, that tuberculosis victims are fewer than ever before; that the community that is clean, well-fed, properly housed, and amenable to the requirements of modern sanitation, has much less tuberculosis than the community in which these conditions of life do not obtain; but they also realize that tuberculosis snatches victims from among the cleanliest and the best-fed and the best-housed, and that when the tubercle bacillus has succeeded in lighting his fire in a human being, whether that human being comes from the ranks of the rich or the poor, there is no physician living today who can honestly promise the patient that he will surely cure him,—that he will thoroughly extinguish that little fire of tuberculosis. This is true no matter where the patient goes or what the patient does, or what the patient refrains from doing.

The general public is grateful to us for the effect that our crusade against tuberculosis has had in cutting in half the death rate from tuberculosis, but even the general public is not deceived by the recent catechumens who insist that their new faith is all that is necessary to banish tuberculosis. No, indeed, the general public is not deceived! Witness, for instance, the intense and world-wide interest that is shown by governments, scientists, medical journals, and the great newspapers, whenever the rumor rises that something in the way of a tuberculosis cure has been discovered. It doesn't matter how weird, or bizarre, or vague, or mysterious the new treatment may be, the whole world is stirred by the thought that perhaps its long-hoped-for blessing may have come at last.

It is evident that tuberculosis research is necessary, that tuberculosis research can be done and should be done at state tuberculosis sanatoria, that the cost of tuberculosis research at state tuberculosis sanatoria is trifling, and that the general public as soon as it realizes what opportunities abound at state tuberculosis sanatoria for learning the truth about tuberculosis, will, with a stern voice, demand that these opportunities be no longer neglected.

### OPPORTUNITIES NEGLECTED

Why is it that these opportunities have been and are now neglected? Why haven't we, into whose hands thousands of trusting tuberculous men and women have placed their lives,—why haven't we in the last dozen years learned something of importance concerning nature's technique in curing tuberculosis; why haven't we learned what was lacking in the patients or in nature's technique, in such cases as nature failed to cure? We haven't learned these things, nor made any serious attempt to learn them, because the learning of such things was not expected of us, and because we were satisfied with our reputation of conducting sanatoria that were as good as those of any other part of the world. In view of the general public's new expectation of us, what have we done, and what should we do?

### CONNECTICUT'S FORMULA FOR RESEARCH

Perhaps you will allow me to tell you how we in Connecticut are endeavoring to answer that question. Our Connecticut method of answering it has in late years attracted considerable attention, and brought us praise, perhaps undeserved, but pleasant to hear.

Many of the tuberculosis authorities in other States have asked us in Connecticut how it is that we succeed in doing so much interesting research work at our State Tuberculosis Sanatoria.

The National Association Executive Committee has directed its National Committee on Research to try to get Connecticut's formula for stimulating sanatorium research and for securing medical staffs of State Tuberculosis Sanatoria, who are able and willing to do scientific research work on the general subject of tuberculosis.

Connecticut's formula is a very simple one. Connecticut, as you know, has five tuberculosis sanatoria,—three for adults, Hartford, Shelton and Norwich; and two for children, Meriden and The Seaside at Niantic. Once a month the State Tuberculosis Commission holds one of its regular weekly meetings at one or other of these sanatoria. To this meeting all the medical officers of all the sanatoria are invited, and the medical staff of the visited sanatorium is expected to have ready for presentation and discussion some serious study or bit of research work, important enough to repay the visiting physicians for the time and trouble they have spent coming to the conference. Each sanatorium has two of these conferences in the year, and has, at least, five months to prepare for each meeting.

To these monthly medical conferences, prominent physicians of our own and our neighboring States, known to be especially interested in tuberculosis, are frequently invited. Of course, when the staff of a sanatorium has a subject big enough to occupy its attention for more than one five-month period, it makes one or more preliminary reports before summarizing the whole work.

In order to make the discussions as interesting and spicy as possible, all the visiting physicians are told, a week in advance, what kind of work it is intended to report. The newspapers are keen to use any available information as to the doings at these conferences. We feel that it is perfectly legitimate to let them have news items concerning the meetings, and in these items to give credit to the men who have done the work.

The State Tuberculosis Commission knows, of course, that a little sympathy and recognition are pleasant and helpful to all who strive,—even to sanatorium physicians who do tuberculosis research work,—and the Commission, therefore, does what it can to help in the selection of important problems, and to show appreciation of good work done in their solution.

In regard to the recurring question as to where we get medical superintendents, who are both good executives and good research workers, the answer is, we grow them in Connecticut. One of our superintendents was born in Pennsylvania, one in South Carolina and three in Connecticut, and none of the five was a sanatorium superintendent before entering the employ of the State of Connecticut. None of the five had any other special preliminary training in laboratory or scientific technique than such as is part of the training of physicians in the ordinary first-class medical schools. These men not only manage their sanatoria in a way that brings them praise, but they also supervise tuberculosis clinics in the surrounding towns, and to this work give several hours a week. Yet, as is apparent from the incomplete list of papers that has been handed to you this morning, these five medical superintendents and their assistants have made some ambitious efforts to solve important tuberculosis problems. And many of their reports have not only been published by our best journals, but they have been quoted approvingly by the best foreign reviews.

One small but important detail in Connecticut's formula for sanatorium research is our employment of an expert laboratory technician who spends one week a month at each of the four largest sanatoria and makes culture media and stains, and, at every visit, examines the sputa of all the patients. This relieves the medical staff of the time-killing drudgery of the laboratory. Of course, special studies of sputa and special kinds of culture media are made by the physicians themselves, and they constantly check up the routine laboratory reports.

Another point in our formula is this: An insistence that tuberculosis research is not necessarily a matter for the chemical or bacteriological laboratory. It is quite possible that the solution of the tuberculosis problem will be discovered by some observing worker to whom the test tube and the microscope are unknown or abhorrent,—somebody, perhaps, to whom the x-ray, or radium, or the sunlight will give an epochal revelation; somebody, perhaps, who will find that it is due to conditions of the kidneys or the liver or the ductless glands or the skin that certain families or individuals resist even massive infections, resist the infectivity of tuberculous houses and of tuberculous husbands and wives.

### THE TRUTH AT THE BOTTOM OF A WELL

In conclusion, may I add that it is the unanimous opinion of all concerned that the institution of these monthly conferences of the medical officers of our Connecticut sanatoria, has had the effect of developing among the conferees a splendid feeling of enthusiasm and camaraderie which is not only very pleasant to see but which is, also, a very great asset to the State and to the men themselves. No sooner does Calmette's bebiled bovine bacillus come into existence than it is the subject of the liveliest discussion, and cultures of bebiled bacilli are grown at several of the sanatoria. No sooner are the Spahlinger, the Much partigen, and the Dreyer treatments born, than our physicians examine them and watch anxiously to see if they will survive the first few weeks. It is the first summer that is most dangerous for young tuberculosis cures.

Perhaps the tone of my talk this morning has been irritatingly boastful of Connecticut. I hope it hasn't, because I am very anxious to please you as well as to interest you.

If I have unduly stressed the gropings in the tuberculosis darkness by the sanatorium doctors of Connecticut, my excuse is that you and other tuberculosis authorities of the country are to blame. You and they have paid us so many compliments and have asked so many flattering questions that I was easily led into believing that your Secretary was right when in his invitation he intimated that a discussion of our Connecticut methods would interest you. Cards that tell the titles of the discussions at some of our sanatorium conferences during the past few years have been handed to you. We ask you to read them, not because we believe that you cannot do and have not done as good or better work. We wish merely to say, as the small boy in the pool says to his hesitating chum on the bank, "Come on in! The water is fine."

In one respect this illustration is not very pat, for neither you nor any of the other authorities of the world realize more thoroughly than we in Connecticut, that the important tuberculosis truth that we seek lies, not in a sunlit and open pool, but at the bottom of a very deep and very dark well, and that into that well the Connecticut bucket has descended but a very short distance from the surface. We hope that the Connecticut bucket will be the first to reach the crystal spring at the bottom of that well, but if the Massachusetts bucket, or any other New England bucket, or any other American bucket is first to immerse itself in the limpid treasure at the bottom of that well, we in Connecticut will heartily join with the rest of the world in giving acclaim to Massachusetts, or to Rhode Island, or to Maine, or to New Hampshire, or to Vermont, or to whatever State the meed of victory is due.

## THE SIGNIFICANCE OF RUTLAND TO THE NATION*

BY HARRY LEE BARNES, M.D., WALLUM LAKE, R. I.

If we would measure the influence which the establishment of the first State Sanatorium by Massachusetts has had on tuberculosis work in this country, we must consider the opportunity which a consumptive had of obtaining sanatorium treatment 25 years ago.

Following in the footsteps of Trudeau, private initiative had already established 15 sanatoria in the United States containing 1100 beds. With about a million consumptives in the country, and let us say 250,000 in favorable stages, there was perhaps one chance in 200 that a patient could obtain sanatorium treatment.

The problem of furnishing sanatorium beds in numbers sufficient for ordinary working people was too vast for individual effort. In order to convince State Legislatures that State Sanatoria were worth while and feasible, it was necessary that some State should lead. It is to the credit of Massachusetts that she established and successfully conducted this experiment station at Rutland which demonstrated to other States the value and practicability of public sanatoria for tuberculosis.

Just as America waited for Trudeau to show her that open air and rest methods could succeed at Saranac as in Germany, so Massachusetts waited for Bowditch to show her that good results could be obtained in the poor climate of Sharon. This Sharon demonstration was necessary, before there could be a Rutland, just as Rutland was necessary before there could be public sanatoria throughout the country.

Not a little of the confidence with which the results at Sharon and Rutland were watched and applied by the whole country in the last 30 years has been due to Dr. Bowditch. His courage and vision in starting the Sharon experiment were equalled only by his conservatism and modesty in stating the results.

It has been the good fortune of the Rutland State Sanatorium to have interested in its welfare in the past such men as the late Dr. Frederick I. Knight, Dr. Edward O. Otis and Dr. Arthur K. Stone, whose work in tuberculosis is everywhere respected.

In considering the influence of Rutland on the development of tuberculosis work elsewhere we should not forget the young physicians trained here at an early period, when trained sanatorium men were scarce, who left Rutland to help organize tuberculosis work elsewhere,—Markley, Dunham, Crane, Runnells, Bartlett, Gammons, Wise, Pettingill, Howes, Washburn, and others who, as sanatorium executives and field workers in tuberculosis in other States, have done their part in spreading the sanatorium influence.

It was six years after Massachusetts had pointed the way that New York opened the second State Sanatorium in the United States at Ray Brook, and still another year before Rhode Island opened the third State Sanatorium at Wallum Lake.

In 1907 State Sanatoria were opened in Missouri, Michigan, New Jersey and Wisconsin. In 1908 in Minnesota, Iowa, Maryland and North Carolina, and in 1909 in Ohio, Connecticut, New Hampshire and Virginia. The movements for the establishment of all these early State Sanatoria received much of their inspiration from the success attained here at Rutland. As illustrating this point I will cite three instances as typical of many others.

In the first report of the Michigan State Sanatorium the Trustees noted their visit to Rutland and the benefit derived from it in the establishment of their institution.

In 1908 the Board of Health of the State of Washington began an educational campaign against tuberculosis, and as a prominent feature of their exhibit secured a complete model of the Rutland State Sanatorium which was shown throughout the State. Sanatoria followed this campaign in due time. The health official active in showing this Rutland model to the people of Washington was Dr. Eugene R. Kelley, the present Health Commissioner of Massachusetts.

The Rhode Island Committee of the General Assembly appointed in 1901 to consider the question of a sanatorium, visited Rutland, quoted largely from its medical and financial statistics and drafted an Act establishing a sanatorium in language containing not only many of the ideas, but much of the phraseology of the Massachusetts Act establishing its sanatorium.

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*Address delivered at the twenty-fifth anniversary of the establishment of the first public sanatorium in the United States, at Rutland, Mass., September 13, 1923.

Beginning here, the movement for State Sanatoria has spread until 32 of our States operate sanatoria, the total number of beds in these institutions being 11,177. Three other States have hospitals for all stages of tuberculosis, containing 352 beds.

In some of the States, county sanatoria have been erected in preference to or as an extension of the state sanatorium idea. The 170 county sanatoria and hospitals for tuberculosis in the United States now have a total capacity of 13,024 beds.

Twenty-five years ago there were a few homes for advanced consumptives in the larger cities, but most indigent consumptives were given a low standard of care in the almshouses and there was no serious thought of segregation of advanced consumptives for the good of the community. The erection of hospitals or wards for tuberculosis by municipalities was but a natural development of the Massachusetts plan for State Sanatoria.

We now have in the United States 61 municipal tuberculosis sanatoria and hospitals or tuberculosis wards of general hospitals, with a total capacity of 9206 beds. The Federal Government provides 12,018 beds, giving a total of 45,777 beds provided by the American people. Private sanatoria in this country have a capacity of 14,380 beds. The grand total of all tuberculosis beds in the United States, exclusive of preventoriums, is 60,157.

How have these public owned state, county, and municipal sanatoria, following the successful experiment of Massachusetts, influenced our country in the cure and prevention of tuberculosis? The earliest and most obvious influence has been to inspire belief that patients have a chance of life if taken in time. Twenty-five years ago the general public regarded consumption no more hopefully than did Dickens in his dramatic description of the disease in "Nicholas Nickleby." Sooner or later it was believed to be fatal. The influence on public sentiment in all our New England towns of seeing patients returning from sanatoria without noticeable symptoms, above their normal weight and with the ruddy complexion which goes with robust health, was a source of wonder and an encouragement for other patients to make an effort to live. Thus the education of the public in the proper methods of treating the disease reached nearly every one, for there are few who have not known some relative or friend treated in sanatoria.

The establishment of sanatoria and the advertisement and demonstration of their methods have done much to remove the dread of night air, to teach the value of sleeping with open windows, to start the custom of porch sleeping for normal children, to establish open-air schools and to extend the scope of district nursing. The sanatorium influence has tended to promote popular hygiene and to stimulate public health work.

The influence on the medical profession was marked. Until the opening of public-owned sanatoria, so few patients could afford to go to health centers in California, or Asheville, or to the few private sanatoria in Saranac or Liberty, that most of them gradually failed and died at home. There was little opportunity for the average physician to come in contact with consumptives who had recovered and therefore there was comparatively little realization among physicians of the benefits of the open-air treatment, or little stimulus for early diagnosis. Sanatorium physicians, who have seen many patients lost through delay, have everywhere spread among the medical profession the gospel of early diagnosis, and many take an active part in finding tuberculous patients in their communities by conducting tuberculosis clinics.

The increased hope of cure and consequent desire for sanatorium treatment, the earlier diagnosis which the sanatorium did much to develop, created a constantly increasing demand for more and yet more tuberculosis beds, until now in New England and the Middle Atlantic States practically all tuberculous patients who desire sanatorium treatment may receive it.

As to the effect which sanatoria and hospitals for advanced cases can have on lowering tuberculosis mortality through segregation, it is too early to say. If we look over the census returns, we see as yet no convincing evidence that States which have built hospitals for tuberculosis have had their mortality reduced thereby. The percentage of the total cases segregated has been too small and the time has been too short. Massachusetts, with perhaps 7 to 10 per cent. of carriers segregated, may later furnish evidence.

At the Framingham Demonstration, where the reduction in tuberculosis mortality was unprecedented, the institutional segregation was about 28 per cent. of the active cases.

It would be instructive to have as a control, a demonstration similar to that at Framingham, with as little as possible institutional segregation.

Whether or not hospitalization of advanced tuberculosis will save lives, the removal of consumptives from lodging houses, almshouses and crowded homes of the poor, to hospitals where they receive proper care and nursing, is a work of mercy that needs no justification from mortality tables.

If we are occasionally depressed at the condition this old world is in, if we are appalled at the empty churches and crowded divorce courts, at the selfishness of capital, of labor, of statesmen and of warring nations, let us reflect on the 45,000 beds which the people of the United States have provided for consumptives during the last quarter of a century, acknowledge that our governments, Federal, State, County and Municipal, have played the part of the Good Samaritan, and that Christianity is not altogether a failure.

We may consider for a moment some of the difficulties and limitations under which public sanatoria labor:

1. Many patients are incurable because the early symptoms were too trivial to bring the patient to the doctor or because the doctor failed to detect the disease. This condition can be corrected only by periodic physical and x-ray examinations of the whole population by experts. We are willing to have annual inspection of our boilers, elevators, and even automobiles, but the human machine is not yet considered worthy of periodic examination.

2. The curative power of sanatoria by present methods is limited. The selection of a few very favorable cases, from a great number, although warranted whenever the beds are few, exaggerates this curative power, for had one the opportunity and skill to pick out only curable cases, all his patients should recover.

On the other hand, if statistics of sanatoria admitting only a small percentage of favorable cases be considered, sanatoria may be viewed in a very unfavorable light.

Some years ago I collected statistics from my own work which showed that of patients in all stages admitted to the sanatorium within two months after the clinical onset, about one-third progressed to unfavorable termination, in spite of prompt sanatorium treatment. The remaining two-thirds had their disease apparently arrested in the sanatorium, but of these about half perished within seven years, so strong is the tendency to relapse. In 25 years we have added scarcely anything to the treatment of tuberculosis except pneumothorax, which is applicable to only a minority of cases. We greatly need a new remedy as an adjunct to our present treatment.

3. A severe handicap to public sanatoria is the high standard of intelligence and character required to accept prolonged sanatorium life. Patients who go hundreds of miles from home to health resorts, usually have at least two of the elements of character valuable in the treatment of tuberculosis, namely, a strong desire to fight for life, and a willingness to sacrifice time, money and home pleasures for an indefinite period, in order to win.

If the diagnosis is made early before the patients feel really sick, in many cases they go to the public sanatorium unwillingly at heart and only because of the persuasions of the doctor and district nurse. Many will not consent to go at all unless they are led to believe that they will be well in a few months. Many patients would willingly stay a few weeks, or a few months, or possibly a year, if there was a certainty of cure. If tubercle bacilli are present and you admit to them that a year or perhaps two years may be necessary, and that there is no certainty of cure, too many take a chance on returning home, where they can live, for a time at least, free from institutional restrictions.

We must take human nature as it is and not as we would like it to be. We must appreciate that a considerable percentage of curable patients either will not go to sanatoria or will not remain long enough to effect a cure. Whenever possible, sanatorium treatment should be brought to the homes of these patients by Dr. Pratt's class method of home treatment. Tuberculosis associations should develop and support some such home treatment plan as outlined by Patterson. The class of patients who have not homes suitable for proper treatment and who refuse treatment in sanatoria are outside our present scheme of care.

Statistics are published showing the small percentage of survivors after sanatorium treatment. Such statistics usually mean that the favorable cases were not admitted. If patients in the early stages consider their complaints too trivial for physicians, if physicians fail to diagnose the cases, if after early diagnosis the patients refuse treatment, it is absurd to blame the sanatorium. Sanatorium critics tell us that there is no certain evidence that the sanatorium saves more lives than would be saved if the patients were properly treated at home. We have a right to ask these critics what percentage of patients, especially in the cities, have homes which allow of properly conducted treatment, and what percentage of patients who have such homes will take the treatment faithfully even though they have the opportunity? What percentage of incipient and favorable types of moderately advanced patients with bacillary sputum survive after sanatorium treatment, and how many would survive without sanatorium treatment?

In 1914 I contrasted the end-results of 70 such patients treated from 1906 to 1910 who left the sanatorium after an average stay of two weeks, with the end-results of 77 patients similarly classified and treated in the same years, who remained in the sanatorium six to nine months. Larger numbers would have been desirable but they are difficult to obtain.

Of those who remained less than a month and who, therefore, got little from the sanatorium except ideas as to how to care for themselves, 53, or 75 per cent., were dead, against 36, or 47 per cent., dead among those who stayed six to nine months. These results show that among those who used the sanatorium for only a few weeks as a training school and then cared for themselves at home, there were 25 per cent. survivors against 53 per cent. survivors who accepted prolonged treatment in the santorium. Although sanatoria save many lives, yet they treat such a small percentage of the cases that they usually do not save a sufficient number sensibly to affect the death rate.

In Rhode Island the number of favorable cases admitted to the State Sanatorium annually is only about 15 per cent. of the number of deaths from the disease. If after seven years we check our end-results and find that we have saved only a third of those favorable cases admitted, or 5 per cent. of the total deaths, then 95 per cent. of the total mortality remains. The lives saved by cure in sanatoria, although so few as compared to the total number of tuberculosis deaths, are yet of sufficient value to the community to fully justify the establishment of sanatoria. Thus in Rhode Island, though we save only 40 patients a year, in 25 years we will have saved 1000, whose total annual earnings should amount to over $1,000,000. or over four times the operating expenses of the institution.

Our records show that sanatorium patients, restored to working health who ultimately die of tuberculosis, gain an extra year of life, which still further raises the economic value of the sanatorium.

The significance of Rutland to the Nation is not merely that the example set here by Massachusetts brought sanatoria to other States. The greatest significance of Rutland to the Nation was the recognition by one of the most progressive States that it was the duty of the public to care for the consumptives. It was the first step in enlisting the power of the government to fight the disease, which soon involved not only sanatoria and hospitals for advanced cases, but diagnostic clinics and other anti-tuberculosis activities, by all governments, state, county and municipal.

We cannot foresee the future in store for public sanatoria. Whether a new remedy will be found which will greatly enhance and shorten the cure, whether the disease may be prevented by a vaccine, or whether we must continue the struggle on the present lines, only time can tell.

But whatever happens, the construction of public sanatoria and hospitals in the last 25 years will mark a noble effort to cure the curable, to prolong life, to prevent infection, and to relieve the sufferings from a dread disease.

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## Book Reviews

*The Elements of Scientific Psychology.* By Knight Dunlap. St. Louis: C. V. Mosby Co. 1922. P. 368.

This volume is typical of that psychology which is mainly concerned with static descriptions and experimental measurements of mind, in contradistinction to dynamic interpretations. According to the Preface, "the psychology of today is a science of conscious responses of the organism." Such a psychology can deal only with conscious motives, whereas all clinical experience with the neuroses and with the analysis of human character has shown that the great driving force of human behavior, both normal and abnormal, lies in the realm of the unconscious. As the word "unconscious" is not mentioned in the book, at least in the psychoanalytic sense, the only reference being to a constantly shifting focus of consciousness based on degrees of attention, it is safe to presume, particularly in the light of the quotation given above, that the author does not recognize unconscious thinking. To attempt to write a book on human psychology without recognizing the fruitful concept of the unconscious is about equal to a discussion of modern physiology which does not mention the circulation of the blood.

The volume is really a treatise on physiological psychology which interprets the activities of the human mind mainly from the standpoint of neurons and association tracts and laboratory experiments. A physiological psychology is valuable and necessary as an elementary introduction, but is unable to furnish any explanation of unconscious human motives and a psychology that cannot perform this task, can throw no light on normal and abnormal behavior. An interesting and sound feature of the volume and one which can be heartily commended, is the exposé of the pseudo-science of character analysis, now so much in vogue.

*Urgent Surgery.* By Félix Lejois, Professeur Agrégé à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital Saint-Antoine, Membre de la Société de Chirurgie. Third English edition translated from the eighth French edition by William S. Dickie, F.R.C.S., and Ernest Ward, M.A., M.D., F.R.C.S. New York: William Wood and Company. $16.00.

This book is very definitely a personal manual of surgery. It sets forth in a most readable and interesting style the methods of reasoning and procedures which the author has found most applicable in his many years of experience. This volume is a late, post-war edition of a previous excellent work, and is especially adapted for those whose duties bring them in contact with the surgical emergencies of civil life. Resident surgeons and surgical interns will find much of value and but little which is not of value within the 800 profusely illustrated pages.

The subject-matter is divided into sections covering the head, neck, thorax, spine, abdomen, genito-urinary organs, rectum and anus, strangulated herniae, and extremities. It includes not alone traumatic injuries, but also inflammatory and other clinical conditions which demand immediate surgical interference.

At the beginning of each section and subheading a brief summary or well-chosen case histories carry the reader along with sustained interest. Academic discussions and historical details have been purposely omitted. An unusual amount of practical information is set down in but comparatively few words.

The English text and accurate illustrations have been excellently prepared and systematically arranged, to the credit of the translators and publishers.

*The Doctor Looks at Literature. Psychological Studies of Life and Letters.* By JOSEPH COLLINS. New York: George H. Doran Company. 1923.

This volume is almost sure to excite some surprise and some comment, coming even when it does in an age of psychology made popular for young and old. It may be taken in two ways, either as a feat of literary gymnastics; an attempt to turn some modern minds inside out (as is indicated on the cover) but empirically; or as an earnest effort to show sanely the folly and uselessness of modern psychology popularized, and the dangers of marked introspection as inspired by much that is written today and devoured by minds unfit to receive it. The latter we may hope is the true object of the book, as it probably is.

Much harm has unquestionably been wrought by the publicity given to the more or less false psychology of Freud. Strong meat is not suitable for infants; tainted meat is doubly unsuited. In order to clear the way for what is coming, the author points out the two fundamental instincts of all living organisms: the instinct of self-preservation and that of the preservation of the species. To these is added the herd instinct, which the Freudians recognize only as sublimated bisexuality. Certainly the working of these instincts on the experience presented to the mind has brought about complications, or mental complexes, as they are termed in the New Psychology. The author further tells us that, "while the novelist's business is to see life and his aspiration is to understand what he sees, many novelists of today are, by their works, claiming to understand life in a way that is not humanly possible."

In this work Dr. Collins, a psychiatrist and psychologist, has simply attempted a criticism of the writings of various ultra-modern authors as influenced by their lives, their temperaments and their complexes. It is an attempt to lay bare the psychology of their work, to show how it was influenced by or how it was the reflection of their own mentalities viewed in the light of the "New Psychology," which is the study of the subconscious mind. How well or how poorly this has been done it is difficult to judge, for we are not all psychologists.

However well this object may have been accomplished, some good will be done by opening the shutters of the room and letting a little cold, gray, and truthful morning light of common sense shine in on the shadowy chamber of Freudianism, psychoanalysis, and morbid introspection, for, as he says in one place: "There are many sick souls in the world—far more than is suspected. Very few, comparatively, of them are confined in institutions or cloistered in religious retreats or universities. The majority of them toil to gain their daily bread. They are the chief consumers of cloudy stuff and mystic literature. The purveyors of the latter owe to them not to deceive them about psychoanalysis. As a therapeutic measure it has not been very useful. The novelist should be careful not to give it more potentiality for righteousness than it possesses."

*Diseases of the Rectum and Colon, and Their Surgical Treatment.* By DR. P. LOCKHART-MUMMERY, F.R.C.S., Eng. New York: William Wood and Company. 1923. Pp. 872, including index.

Many general surgeons have not kept pace with the developments in the special fields covered by this book and they would profit greatly by reading it. They would doubtless disagree with some of the dogmatic statements contained in it, but they would find that many of the procedures recommended would appeal to their surgical sense, and unquestionably, if followed, would improve their results of operations performed on the rectum.

Dr. Lockhart-Mummery, although he says that he has not attempted to make an encyclopedia on this special subject, has covered it very thoroughly, and the illustrations are wonderfully clear and excellently demonstrate the points discussed in the text. His description of the preparation of the rectum so as to make it possible to operate on clean tissues and obtain aseptic healing is well worth reading, and its main principles undoubtedly should be adopted.

The chapter dealing with hemorrhoids, both internal and external, is particularly well worth while, and his discussion of the sphincters gives cause for thought, as one can realize when they read Chapter 24, on the operative treatment of fistulae.

Besides these before-mentioned common affections of the rectum, Dr. Lockhart-Mummery has discussed quite fully the physiology of the large bowel, anesthesia, diseases of the colon and malignant disease of that region.

As was stated at the beginning of this review, the book, although particularly valuable to specialists in this field, should be of real educational value to the general surgeon and is well worth his reading.

# Case Records
# of the
# Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY
RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.
F. M. PAINTER, ASSISTANT EDITOR

## CASE 9481

AN unmarried American woman of fifty-six, a housekeeper in a boarding school, entered July 9.

F. H. Her mother died of tuberculosis when the patient was twenty-three months old.

P. H. She had the diseases of childhood, including scarlet fever. At seven years she had rheumatic fever, at thirty-four pneumonia, at forty-one and again at forty-six pleurisy. She had occasional headaches, probably from her eyes. She was nearsighted. All her teeth were removed fourteen years before admission. Six months ago she had palpitation of the heart. Before the menopause she always had much dysmenorrhea.

P. I. For eight years she had had itching of the genitals with vaginal discharge, not relieved by carbolic ointment or cold cream. The discharge had been continuous since the onset. During the winter five years ago there was some extension followed later by spontaneous improvement. In August, two years ago, she had a breakdown, with much worry and loss of sleep and appetite. At this time the skin lesions extended down inside the legs. They had not receded since this time. Itching was troublesome until a year ago last April, when it was considered relieved by x-ray and under this treatment later practically disappeared. Numerous ointments relieved the symptoms, but did not cause the lesions to recede. Pelvic examination the year before admission was negative. Numerous cultures were negative. One vaccine was tried. During the past six months she had lost thirty or forty pounds.

P. E. Fairly well developed. *Heart* somewhat enlarged to percussion. No measurements recorded. Apex impulse best felt in the fifth space. First sound much accentuated, with a suggestion of a presystolic murmur. Faint blowing systolic also present. No definite mid-diastolic, though there was a suggestion of one at times. Second sound reduplicated. *Lungs* not recorded. *Abdomen, extremities* and *pupils* normal. *Reflexes.* Knee-jerks hyperactive. *Genitals.* Skin eczematized over the genitals and inner surface of thighs for a distance of four inches, showing intense shiny erythema covered superficially with moist gray-white vaginal discharge. No signs of suppuration or vesiculation present.

*T.* 97°-101.2° over a period of eleven weeks. *P.* 80-127. *R.* 18-34, with a terminal drop to 14 (morphia). *Urine.* Amount not recorded. Sp. gr. 1.014 at the first examination, 1.012-1.004 at eleven others. Cloudy at two, alkaline at one, a very slight trace to the slightest possible trace of albumin at eleven, bile at four, leucocytes in large numbers at eight, red blood corpuscles at nine. No sugar. *Blood.* Hgb. 80%-35%, leucocytes 5,000-10,500, polynuclears 40%-52%, reds normal, platelets normal or slightly increased at the first examination. Marked achromia, very slight variation in size and shape and some polychromatophilia at the second, when platelets appeared decreased. Third examination, reds 1,350,000, many huge polychromatophilic red cells, many reds markedly achromic, many poikilocytes, platelets markedly diminished. *Wassermann* not recorded.

*Orders.* July 9. 1/2% acetic acid until irritation becomes excessive, then Reilly ointment. July 25. Crude coal tar paste.[1] July 30. 1/2% acetic acid. Zinc oxid, calamin and glycerin wash[2] p.r.n. August 9. Magnesium and ferric sulphate mixture[3] one tablespoonful in the morning. August 23. Boric acid locally in place of 1/2% acetic acid. August 26. 1/2% acetic acid. Zinc oxid wash[2] p.r.n. September 7. Veronal gr. x. September 8. Codein sulphate gr. 1/4 by mouth; repeat in an hour and a half if still awake. September 10. Codein gr. 1/4 by mouth. September 12. Veronal gr. x. September 13. Codein sulphate gr. 1/4 by mouth. Triple bromides gr. v t.i.d. September 17. Hexamethylenamin gr. v t.i.d. in a large glass of water. Acid sodium phosphate gr. v t.i.d. September 28. Salol coated ox gall, one four-grain pill t.i.d. half an hour before meals. September 29. Codein sulphate gr. 1/2 by mouth at 10 a.m. September 30. Morphia gr. 1/6 s.c. at 4 a.m., gr. 1/4 at 5.45 a.m.

A surgical consultant was unable to make a vaginal examination on account of contraction of the vagina. Another surgeon made a rectal examination which showed the uterus enlarged and retroverted, and in the region of the right broad ligament apparently a mass the exact nature of which was not determined. Inspection of the introitus and perimeatal mucosa showed no evidence of discharge from higher up. "I do not believe the pelvic organs are directly responsible for the external condition. Possibly rest plus ovarian extract of some sort might be of value."

Acetic acid and compresses gave great relief. By August 17 the lesions did not appear so highly inflammatory. By the 21st however an acute flare-up of the condition had occurred, attributed to the use of the coal tar paste. The acetic acid treatment was resumed with relief. The patient continued to gain slightly for the next week. The borders fo the skin lesions seemed to recede a little.

By September 5 new areas had appeared which certainly suggested epithelial overgrowth. Small subcutaneous nodules appeared in both flanks. The patient was rapidly losing strength, became more anemic and was very weak. By advice of a surgical consultant biopsy was done September 16. A mass was now noticed in the right flank.

The patient lost strength very rapidly. X-ray treatment was pushed to the limit of endurance. September 21 there were symptoms of cystitis for which hexamethylenamin was given. The patient had frequent nosebleeds. The mass in the right flank seemed to be definitely connected with the liver. September 25 she looked very slightly jaundiced. Though she was weaker the local lesions looked considerably better. September 29 she was very much worse, and vomited everything except a little fluid. Early the next morning she was somewhat acidotic. 1700 c.c. of 7½ per cent. glucose was given subpectorally with only slight benefit. At noon she died.

## DISCUSSION

### BY DR. RICHARD C. CABOT

### NOTES ON THE HISTORY

Up to the beginning of the present illness we have two suggestions: first of tuberculosis, from the facts that she was exposed to it in childhood and that she has had two attacks called "pleurisy." If they were pleurisy there is a considerable chance that they were tuberculous. Second, the fact that she had rheumatic fever at seven and for six months has had palpitation suggests a heart lesion. With those two clues we go on to the present illness.

This is puzzling because it is chiefly of a skin trouble which now seems to have got well; just what she came to the hospital for is not clear,—perhaps for her loss of weight, perhaps for her palpitation. But I do not think this probably gives a quite correct idea of what happened in the present illness. Have we nothing more to show what the admission symptoms were?

DR. GREENWOOD: The skin condition continued, Dr. Cabot; it never cleared up. She came in for the skin condition.

DR. CABOT: Ah, then it is a skin case primarily, coming into the skin ward.

### NOTES ON THE PHYSICAL EXAMINATION

This examination of the heart distinctly suggests, but does not prove, mitral stenosis, the doubled second sound, the possible middiastolic, the possible presystolic, all suggestive but not conclusive signs of mitral stenosis, which her rheumatic history would lead us to suspect.

There is notably low gravity at all the urine examinations, but with considerable swing. With such an inflammation at the vulva we think at once of diabetes as a cause, but from this urine examination she evidently did not have it.

It is very unusual to see such a loss of hemoglobin as this within eleven weeks. This is a tremendous anemia. But the description leaves me in doubt as to what type of anemia it is. They mention achromic reds and big reds, and we do not make out which are more numerous, though probably the achromic reds are, which would tend towards a secondary anemia. There is no type of skin disease which, so far as I know, of itself produces anemia. Dermatoses go along with anemia, but cannot be the cause of anemia.

Local remedies were given, plus general sedatives, in an attempt, I suppose, to allay itching.

"Epithelial overgrowth"—that is, malignant disease.

September 21 is the first time we hear of a mass connected with the liver, but something in the right broad ligament was mentioned by the surgeon who made the rectal examination.

Dr. Greenwood, what was the nature of the skin lesion?

DR. GREENWOOD: Around the labia, extending down on the thigh, she had an erosive dermatitis, which had existed for six or eight years. I had seen her about a year before she came into the hospital. This lesion stayed about the same, severe, and looking as though the epithelium was eroded, oozing serum all the time, very uncomfortable, and practically never improving at all. When she first came in it suggested epithelial overgrowth, and a biopsy was done, but it showed just the opposite, an erosive ulceration as of ordinary eczema caused by external irritation, and that was the diagnosis under which she came in.

DR. CABOT: Then later we have this suggestion that there is epithelioma there, and then the appearance of lesions in internal organs, which makes us still more strongly suspect malignant disease,—apparently malignant disease of the liver, perhaps malignant disease in the pelvis. That accounts, of course, for the anemia as no eczematous skin lesion would. I am inclined to believe, largely from the anemia and from the apparent evidence of internal lesions, that this finally was an epithelioma of the skin around the genitals.

### BIOPSY

Malignant growth. The cells are arranged in definite acini and strands; but the type of cell suggests the adrenal tumor, *i.e.* hypernephroma.

### FURTHER DISCUSSION

Dr. Cabot: They determined that this is malignant, and they raised the question whether it could be a metastasis from hypernephroma, because there is a mass in the flank.

Dr. Young: Where was this biopsy taken from—the growth on the thigh?

Dr. Greenwood: No, the growth in the center of the eroded area. She had four or five tumors. We took off one of those.

Dr. Cabot: I should suppose this could not be a metastasis from hypernephroma. Does that ever appear in the skin?

Dr. Richardson: Subcutaneous metastasis is one of the characteristics of it.

Dr. Young: Have we ever had one here?

Dr. Richardson: Yes, I have specimens of a case we have had here.

Dr. Cabot: Then under the skin if not in it is a possibility. But I still remain skeptical and do not believe that these are metastases from hypernephroma.

Dr. Young: Don't you think that if it is we have to assume two entirely separate conditions, —first an eczema and then, perhaps because of an eroded area there, metastases. We could not have a hypernephroma of eight years' duration.

Dr. Cabot: Nobody has ever said, so far as I know, that it produced the eczematous type of skin lesion that we have in the beginning of this case. So it is more probable that this is epithelioma with metastases to the internal organs, in the opposite direction from that suspected in the biopsy. It seems to me the liver is the organ to suspect; I think there will also be lesions in the pelvic organs. We have no way of excluding the possibility of lung metastases, although there is nothing in the clinical history.

We mentioned the possibility of mitral stenosis. We have nothing either to confirm or to upset the guess of mitral stenosis which we made in the beginning. That of course would be a wholly separate process having nothing to do with the death. I do not feel at all confident of it. The examination is not conclusive to me. It seems to me possible but not so very probable.

Dr. Wyman Richardson: Those murmurs disappeared while she was here.

Dr. Cabot: That is an important addition to the record, although they may have disappeared because of the patient's lying so quiet in bed, and might have reappeared if she had been stirred up again.

A Physician: Do you think the anemia is due to the action of the epithelioma?

Dr. Cabot: Yes, I think that is the supposition, that it is due to the neoplasm and its metastases.

I do not see that we can go any further as to what Dr. Richardson will show.

### CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Chronic eczema.
Hypernephroma.
(Biopsy.)

### DR. RICHARD C. CABOT'S DIAGNOSIS

Epithelioma with metastases.
Mitral stenosis?

### ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

Carcinoma involving the adrenals, liver, spleen, urinary bladder, peritoneum, pleura, lungs, mediastinum, marrow of vertebrae, thyroid, subcutaneous tissues, labia, and the retroperitoneal, mesenteric, bronchial, tracheal and inguinal lymph glands. (The site of origin of the new growth is undetermined.)

2. *Secondary or terminal lesions*

Icterus.
Slight ascites.
Hypertrophy of the thyroid.

3. *Historical landmarks*

Slight chronic endocarditis of the mitral valve, slight stenosis.
Hemorrhagic areas of small intestine.
Slight chronic pleuritis.
Cholelithiasis.
Chronic mastitis.

Dr. Richardson: This is an interesting case from many points of view, and like many of these interesting cases, when we come to the end, with all the evidence in, there is a chance still for discussion.

Dr. Greenwood brought to the laboratory for diagnosis a nodule from the skin in this case. The sections showed new growth tissue like that of a hypernephroma, and as a matter of fact there were tumors in the adrenals in this case.

The skin, mucous membranes and conjunctivae showed a pale yellowish tinge.

The abdomen was slightly distended. In the upper right quadrant was what was apparently a resistant mass. This turned out to be the liver, and requires no further comment. On each side of the body there were nodules under the skin, in the region of the flanks, and in the axillary line. In the region of the labia and extending down on the buttocks was the area that has been described. On the left side enlarged glands were felt in the inguinal region.

There was 500 c.c. of thin pale yellowish fluid in the peritoneal cavity. The appendix was out of the picture. The pelvic peritoneum showed scattered over it minute to small plaques and nodules of new growth tissue. The breasts were negative except for some chronic mastitis. The gastro-intestinal tract was negative except for smaller and larger hemorrhagic areas in the mucosa.

The mesenteric glands were slightly enlarged, and some of them showed new-growth-like tissue. In the great omentum there were several nodules of new growth tissue situated near the greater curvature of the stomach but free from it. The retroperitoneal glands however along the lesser omentum and down along the aorta and the iliacs were markedly enlarged and infiltrated with new growth tissue.

There was a small amount of thin pale fluid in the pleural cavities, and we found a few old adhesions on each side.

Then enters another condition. The thyroid gland was markedly enlarged,—six cm. by four by four and a half cm.

Dr. Cabot: Was that seen in life?

Dr. Richardson: Yes, I believe it was. In places the condition was so chronic that there was much fibrocalcareous tissue; in other places it looked like thyroid tissue.

No definite masses were made out in the lung tissue itself; but the pleura showed in a few places small plaques of new-growth-like tissue. The bronchial glands were enlarged and showed some infiltration with new-growth-like tissue.

The heart weighed 248 grams. There was slight chronic endocarditis of the mitral valve with slight stenosis—an amount of deformity due to shortening and thickening of the chordae tendineae, with fibrosis of the curtain, which taken all together constitutes chronic endocarditis. The circulatory apparatus generally was negative.

The liver weighed 1750 grams and was sown with tumor tissue, not in the abrupt well outlined nodules that commonly occur with cancer, but in minute to small sometimes stellate areas which coalesced often and formed much larger areas of infiltrated tissue.

There were eight pyramidal stones in the gall-bladder each about 13 mm. in greatest dimension. The mucosa, ducts, etc., negative. The pancreas and duct, negative. The spleen was moderately enlarged and its section surfaces were infiltrated with new-growth-like tissue like that in the liver. In each adrenal there were several small masses of new growth tissue, the largest about two cm. across.

As a rule we find larger masses of new growth in the adrenal when it is the source of a tumor. But be that as it may, in each there were masses of tumor tissue which presented somewhat the picture that was given by the sections from the subcutaneous tissue in the region of the labia.

The kidneys were negative.

In the region of the trigonum of the bladder there were a few small plaques and nodules similar in character to those mentioned. The uterus was small. The cervical region was somewhat dilated and contained much mucus, with a little blood in the upper part of the cavity. The vagina was small, with fibrous tags of adhesions extending across from side to side nearly occluding it. The os presented as a pin-sized orifice. In the broad ligament were a few small nodules of new-growth-like tissue. There were a few old adhesions in the pouch of Douglas.

The bone marrow was extremely pale and homogeneous.

The examination of the sections of the tumor tissue from the various places leaves us undetermined as to the primary source.

Dr. Cabot: What are the possibilities?

Dr. Richardson: The tumor tissue infiltrated the thyroid, but there did not seem to be evidence enough to regard the thyroid as the source.

Dr. Cabot: That is, if it did not start in the adrenal, the thyroid is the next possibility?

Dr. Richardson: Possibly. The breasts and gastro-intestinal tract are ruled out, and the liver. The anatomy is entirely different from primary cancer of the liver.

Dr. Cabot: If you tried to help us out in reconstructing the whole of this story you would say I suppose, "This patient started with an ordinary eczema about the genitals, eight years back. Then at some time considerably later she got a hypernephroma, and that hypernephroma started throwing things around and threw a patch down there into the previously eczematous tissue, which itself had nothing to do with the hypernephroma."

Dr. Richardson: Yes. If we assume that this is an adrenal tumor, that seems to be the proper genesis. The sections of the new growth tissue are not like those from the usual epitheliomata.

Dr. Cabot: Dr. Barney, did you ever hear of this sort of hypernephroma doing this?

Dr. Barney: I have heard of its doing almost everything, but never that.

Dr. Cabot: But it is not unusual to have a small hypernephroma with big metastases elsewhere?

Dr. Barney: Not at all. The activity does not seem to depend at all on the size.

A Physician: Does it always originate in the adrenals?

Dr. Richardson: There you open up a terrible chapter. What do you mean by hypernephroma? There are cases where we find tumors which are called hypernephroma to where we find no tumors in the adrenal at all but do find them in the kidney. Of course if you go back further and accept the hypothesis of adrenal rests, then we accept that; but although you accept it, it is another thing to demonstrate it. Or from another point of view they are classified this way: those tumors which seem to arise in the kidneys are called nephromata. The adrenals have nothing to do with it. Then again we get distinct tumors which appear in the adrenals, varying in size, usually larger than they are in this case, and we find metastases in the kidneys and other places.

Dr. Cabot: Does anybody call it hypernephroma even though there is nothing in the adrenals?

Dr. Richardson: Yes.

Dr. Aub: Was this a cortical tumor?

Dr. Richardson: There is another chapter. Yes. It is supposed to be a cortical tumor. The moment we consider hypernephromata we open up all these questions as to the genesis of these tumors which involve sometimes the kidney, sometimes the adrenals, sometimes both. In structure they are more or less alike, but at times they show a structure, in those cases where we call it nephroma, more as if they had arisen from the kidney tissue, in others more as if they had arisen from the adrenal tissue.

Dr. Cabot: Are there adrenal tumors that do not arise from the cortex?

Dr. Richardson: Yes. There is a type of tumor called neuroblastoma. They have been found in the adrenal and are supposed to arise from the cells in the medulla.

Dr. Aub: I was interested to know whether as this thing developed this case showed any tendency to masculine characteristics, which I thought were associated with cortical tumors.

Dr. Cabot: There was no abnormal growth of hair or anything of that sort in this case, was there?

Dr. Richardson: No, although cases of adrenal tumor have been reported associated with abnormal sex characteristics.

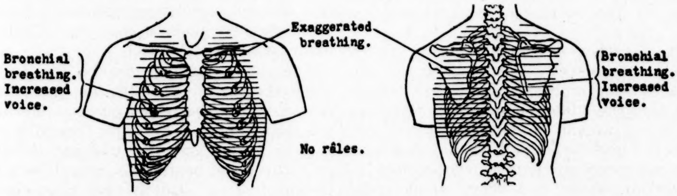
## CASE 9482

An American housewife of fifty-six entered January 7.

F. H. Her father died of heart failure at eighty-four, a sister of insanity following the menopause.

P. H. She had had measles, whooping cough, scarlet fever and canker rash. She passed the menopause in April, the year before admission. In February the same year she became dyspneic. After an attack of "grippe" her legs swelled and continued to be edematous. Two months before admission her abdomen began to swell. It had grown progressively larger. Six weeks ago her general condition took a change for the worse. She developed palpitation, orthopnea, blurred vision, occasional vomiting and nausea, mostly in the morning, cough, aching across the small of the back and urination two or three times at night. Seven weeks ago she stopped work. For six weeks she had been in bed. Two years ago she weighed 180 pounds, her best weight. She now weighed 130 (?). For six weeks her appetite had been poor. Her bowels were kept open by the use of salts.

P. E. Poorly nourished. Skin and mucous membranes slightly cyanotic. Upper teeth false, lower poor. Apex impulse of the *heart* in the seventh space 14 cm. from midsternum in the midclavicular line corresponding to the left border of dullness. No enlargement to the right. Action very rapid. Sounds tic-tac. $P_2$ greater than $A_2$. No murmurs. Pulses of small volume and low tension. *Lung* signs as shown in the diagram. *Abdomen* prominent. Walls flabby, edematous and pendulous. Tympanitic in the upper portions, shifting dullness elsewhere. Fluid wave. Skin of the abdomen thickened and showed many liniae albicantes. Liver dullness not made out. *Extremities.* Marked edema of the legs and the right arm. *Pupils* normal. *Reflexes.* Knee-jerks not obtained. Plantars normal.


Bronchial breathing. Increased voice.
Exaggerated breathing.
No râles.
Bronchial breathing. Increased voice.

*T.* 97.4°-99.6°, with one rise to 101° January 23 and one drop to 96.2° January 25. *P.* 120-138 the day of entrance, afterwards 63-113. *R.*

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[1] Crude coal tar ʒ ss, zinc oxide paste ℥ i.
Zinc oxid paste: Zinc oxid ʒ ss, amyl and petrolatum each ℥ ss.

[2] Zinc oxid ʒ ii, calamin ʒ i, glycerin ʒ ii, phenol minims xx, water to make ℥ viii.

[3] Magnesium sulphate ℥ ii, ferric sulphate ʒ ss, dilute sulphuric acid ʒ ii, water to make one pint.

18-38. *Urine.* ℥ 15-50. Sp. gr. 1.008-1.020. Cloudy at five of seven examinations, alkaline at six, a large trace to the slightest possible trace of albumin at all, some blood at the first, a few to many leucocytes at three. *Blood.* Hgb. 85%. Leucocytes 8,800.

January 8 the right chest was tapped and over 2700 c.c. of fluid withdrawn with much relief. The pulse dropped from 120 to 70. The fluid was pale, cloudy, slightly alkaline, sp. gr. 1.009, albumin 1 per cent. Culture negative. Smear, 99 per cent. lymphocytes. The fluid slowly returned in the right back, but the patient continued very comfortable. She coughed up a good deal of sputum. January 19 a second tap gave two quarts and eight ounces of straw-colored fluid. The patient was more comfortable, but the general condition was less satisfactory. She slowly failed. January 21 she became somewhat delirious. She grew much weaker. A few purpuric spots appeared on the skin. She continued to be comfortable and cheerful after this, and seemed to gain a little. Her chest again filled, but tapping did not seem advisable in view of the general condition. January 31 her heart suddenly stopped beating.

## Discussion

### BY DR. RICHARD C. CABOT

#### NOTES ON THE RECORD

Up to February none of the history seems to be especially significant. Dyspnea was her first symptom.

#### NOTES ON THE PHYSICAL EXAMINATION

1. This is rather an extraordinary cardiac measurement, if correct. The apex in the seventh space is very much displaced downwards, and yet it is in the midclavicular line; and four~~teen cm.~~ for a woman sounds pretty far out, yet if it is the midclavicular line that is a more important measurement than the centimeters. So I am uncertain about this heart which seems displaced or enlarged. Nothing is said of arrhythmia.

2. The diagram shows in the left side, back and front, simply exaggerated breathing, that side doing extra work on account of the right. At first we should think of a pneumonia on the right, but when we look down and see that the temperature is normal, that does not seem so probable. It looks more like fluid. We shall come back to this.

3. There is ascites.

4. Essentially this has been a normal temperature, and not a high pulse, most of the time between seventy and ninety. (Referring to the chart.) From the information that I get from this chart, with so low a pulse all along, and no arrhythmia, it is very hard for me to make this a cardiac case, although it has been looking like a cardiac case so far. There is no suggestion that we were not getting all the beats from the apex. Apparently we recorded the number of actual heart beats.

5. The urine examination does not sound like nephritis, but may be nephritis. It is consistent with nephritis, but it is not at all characteristic. It sounds like passive congestion, and not very characteristic for that, because the gravity is so low.

Miss Painter: The gravity was only once above 1.016.

Dr. Cabot: Still, 1.020 is not high. It is easily within normal limits.

6. 2700 c.c. is a lot of fluid for a tap. 1000 c.c. is doing very well.

There is another point that bears with me against the idea of cardiac disease. She is now two weeks from her death, and yet she is said to be very comfortable after a tap of the chest, which in cardiac cases usually does not give much relief.

#### DIFFERENTIAL DIAGNOSIS

Heart, kidney, neoplasm,—so far as I see it has to be one of these three things. Let us take them in that order.

1. The history starts off like that of a cardiac case, with dyspnea, cough, edema of the legs, edema of the abdomen, finally palpitation, orthopnea, and nycturia. That is all in favor of cardiac disease. Then the heart seems to be enlarged, and at times there is a very rapid pulse. On physical examination we find general dropsy everywhere, especially in the right chest, but everywhere else too. That is all in favor of heart disease.

The points against heart: (*a*) In the first place the low pulse with no arrhythmia. Of course we may be fooled on this. Perhaps there was arrhythmia. Perhaps they did not know how to count, and this was not the heart but only the pulse beat. We cannot be responsible if they fool us. But if they have given us the facts she had a low heart beat, not a rapid heart beat, and no arrhythmia. (*b*) There are no murmurs to speak of. (*c*) She shows great relief after tapping. I cannot remember any cardiac case that showed great relief after tapping. (*d*) It is very rare to see so much fluid as this in a cardiac case. Wouldn't you say, Dr. Richardson, that nearly three liters of fluid in a chest is very unusual? What do you find in cardiac cases ordinarily—a liter?

Dr. Richardson: I should think a liter was a good deal in a cardiac case.

Dr. Cabot: This is nearly three. The large amount then, the great relief after tapping, and the rapid refilling, do not seem to me like cardiac disease. (*e*) She is only slightly cyanotic. (*f*) They do not speak of dyspnea after she comes here, but weakness chiefly as the case goes on. (*g*) Then the purpuric spots, which might be cardiac, might be acute endocarditis throwing emboli, but might be explained otherwise.

On the other hand the fluid taken out of the chest, the low gravity, is exactly what we should expect with a cardiac case. 1.009 is a typical transudate. That is wholly on the side of cardiac and against everything else, unless possibly kidney. The lymphocytosis does not help one way or the other, merely means that fluid has been there a long time. Any fluid which has been in the chest a long time shows lymphocytosis.

2. Let us take kidney disease: Supposing that would account for the big heart and for all the dropsy, it might have killed her with uremia without requiring a high pulse or much circulatory failure, the lack of which I have been trying to insist on. But the urine is not at all characteristic of nephritis. We do not know anything about the retained products in the blood. There is nothing in the description of the heart that sounds like a kidney case, although it is apparently enlarged, in case it is not pushed over by the right-sided effusion. The thing that weighs most with me is that she never shows any sign of uremia unless the delirium. She does not present the picture of a uremic case. The urine is not characteristic.

3. The fact that I cannot make it either cardiac or renal drives me to consider the third possibility, the question of neoplasm. Certainly it should be considered. If a neoplasm, where? First, thoracic. She started off with dyspnea. She had a rapidly reaccumulating fluid in the right chest. But in three respects that fluid is unlike the fluid of malignant disease. In the first place it is of too low a gravity. Then, in many cases malignant disease of the chest gives bloody fluid. Third, tapping the chest in malignant disease often causes pain instead of relieving. The patient feels worse often instead of better. All these things are against the supposition of neoplasm. Then the edema is very widespread for neoplasm. It is in the legs and abdomen as well as in the chest, which is queer though not unknown. When we get interference with chest circulation the interference gets passed along to the inferior cava and so to the abdomen and legs. But I should feel better in making any diagnosis of neoplasm if there were not this edema of the abdomen and legs. These purpuric spots could be explained as a cachectic purpura such as one gets with malignant disease. Her symptomatology, if accurately described, is a good deal more like malignant disease than like a heart or kidney.

Dr. Young: Why is there edema of the right arm and not of the left?

Dr. Cabot: I am glad you reminded me of that. Her fluid is on the right side, and if it was due to a local cause in the chest, the same cause which produced the fluid would give edema of the arm. On the other hand, I have been fooled a number of times on that in cardiac cases, which show edema of the arm sometimes from venous thrombosis accompanying the heart lesion. If there is a heart lesion this could perfectly well be a venous thrombosis from that.

Let us go back to the possibility of heart disease. If a heart lesion, what heart lesion? Certainly not a valve disease. In relation to the possibility of hypertrophy and dilatation we lack a blood pressure measurement, one of the things we most like.

A Physician: It mentions a low-tension pulse.

Dr. Cabot: Yes; that may or may not be so. We have been fooled a great many times on pulse tension tested by the fingers. But you are right that as far as the evidence goes it is of low tension and not of high. She has no headaches of the type we often get with hypertension, and although palpitation is mentioned once they did not come back to it in the account of the case. Still, if it is a heart lesion at all I think it has to be hypertrophy and dilatation, associated probably with arteriosclerosis or with unknown cause.

Can it be a kidney lesion? I cannot rule it out. The kidney seems to be the least likely of the three, on the whole, on account of the character of the urine and the absence of any uremia.

A Physician: Blurring of vision is mentioned.

Dr. Cabot: Blurring of vision is distinctly a kidney symptom and not a symptom of the other two.

On the whole, it seems to me that malignant disease of the chest is a little the most likely, with hypertrophy and dilatation of the heart second and kidney trouble third. But I do not feel clear on any one of the three diagnoses. It does not run true to type for any one of them.

A Physician: Do you ever get so much edema, ascites and hydrothorax with kidney disease?

Dr. Cabot: Yes, we do. That brings me to speak of one thing I ought to have mentioned, although I do not think I should seriously consider it,—cirrhosis of the liver. I have seen cirrhosis of the liver give a rapidly recurring right hydrothorax, tapped half a dozen times. But there was more evidence of cirrhosis. We certainly have very little here. The abdomen never was tapped, so the condition of the liver cannot be described; but aside from ascites there is nothing to suggest cirrhosis. I think we can rule it out.

A Physician: If this was cardiac edema wouldn't you be pretty sure to get râles in the lungs, evidence of edema of the lungs themselves?

Dr. Cabot: A good point, especially after tapping. But I think it is rather queer that they did not get some anyway. Whatever diagnosis we make, there is probably some edema in that lung. Possibly it is collapsed, but the other lung may have edema. I should like to bet that if we had been there we should have found some râles. The absence would certainly be very queer with cardiac disease.

A Physician: Tuberculous pleurisy?

Dr. Cabot: Yes, if we did not know the patient died. But the fact that the patient died so quickly does rule it out in my opinion. Then tuberculous pleurisy never in my experience has gone with such a widespread edema, and it should give a much higher gravity fluid. I never have seen a tuberculous fluid with a gravity as low as this. One useful fact is the high gravity of the tuberculous type.

I should like to take a vote among those present on these three lesions. I am on the whole saying malignant disease of the chest, which means generally endothelioma of the pleura or some process in the lung itself similar in type.

(In the vote neoplasm had the majority.)

Dr. Young: Would it have to be a neoplasm in the chest? Could it be neoplasm with pressure anywhere else?

Dr. Cabot: I do not think so. It could be the Hodgkin's type or the endothelioma or the bronchus type, but I do not see how it can be outside the chest itself. I am betting on endothelioma of the pleura.

### CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Cardiorenal disease.
Cardiac failure.

### DR. RICHARD C. CABOT'S DIAGNOSIS

Endothelioma of the pleura.
Hypertrophy and dilatation of the heart.

### ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

General miliary tuberculosis.

2. *Secondary or terminal lesions*

Tuberculosis of a bronchial gland.
Tuberculous peritonitis.
Amyloid nephritis.
Amyloid infiltration
Hypertrophy and dilatation of the heart.
Chronic passive congestion, general.
Hydrothorax.
Ascites.

3. *Historical landmarks*

Fibromyomata of the uterus.

Dr. Richardson: The peritoneal cavity showed a well-established ascites. The peritoneum was thickened, showed small and dark areas of discoloration, and was dotted over with tubercles,—tuberculous peritonitis.

The right lung was somewhat collapsed. The lower half showed congestion and tubercles here and there. The left lung was thickly sown with tubercles. They were in much greater number on the left than on the right. The right pleural cavity contained a large amount of thin pale fluid and the left a small amount.

The heart weighed 338 grams. That was not very much hypertrophy, but still hypertrophy. The cavities were slightly enlarged, the valves frankly negative. The coronary arteries, the aorta and the great branches were negative.

The liver showed nutmeg markings, that is, some chronic passive congestion, with tubercles here and there and in addition to that some areas of amyloid infiltration. The spleen showed miliary tubercles scattered through it and on the surface. The kidneys combined weighed 352 grams, a pretty good weight. They showed tubercles here and there and amyloid nephritis, —amyloid in the glomeruli and in the smaller arteries of the kidney. The other organs were negative. We were not permitted to examine the head.

Dr. Cabot: The tuberculosis was all fresh? There was no old tuberculous process there?

Dr. Richardson: No, except in a bronchial gland.

Dr. Cabot: It is rather hard to explain the amyloid.

Dr. Richardson: Tuberculosis.

Dr. Cabot: Miliary tuberculosis is not supposed to cause it.

Dr. Richardson: No, it is unusual. The amyloid was not extensive in this case.

Dr. Cabot: I never heard of it.

I am sorry I drove someone out of the diagnosis of tuberculosis. I did not think of the possibility of the tuberculous peritonitis explaining the edema there. The edema of the legs of course is explicable by the peritonitis, which will interfere with the circulation. The thing which surprises me is the low gravity of the tap fluid. I have never seen it so low as that. I think I should make the same mistake again. It was clean wrong, but I think I should be clean wrong again.

## CASE 9483

A widowed Irish-American cook of fifty-nine entered July 21.

F. H. Unimportant.

P. H. Her general health was good until five months ago. Three years ago she had "neuritis" in the legs. She was occasionally conscious of the beating of her heart. Five months ago she was ill in a hospital with pneumonia. During the attack she had marked frequency and nycturia; also otitis media followed by deafness of the left ear.

P. I. Five months ago, while ill with pneumonia, she developed bedsores of the right ankle, the left buttock and the lower part of the sacrum. These drained in the hospital and for a few weeks after her discharge. Within a month all had healed but one over the sacrum, and this was discharging less freely. Soon afterwards, however, it filled up again. Three months and a half ago it was incised by a physician, and since that time had drained steadily under his care. Flaxseed poultices had been used at times, and more recently simple dry dressings had been applied daily. The sinus was painful and tender at first, but was so no longer. Since leaving the hospital she had felt weak, had been in bed at times and had done no work.

P. E. A fairly well developed and nourished woman showing evidence of loss of weight. Teeth poor. Pyorrhea. Apex impulse of the *heart* in the fifth space 10 cm. from midsternum. Percussion measurements not recorded. Basic regular rhythm, but many extrasystoles. Pulse deficit 3-4 a minute. Sounds loud but slapping. *B. P.* 142/110. *Lungs* normal. *Abdomen.* Liver dullness from fifth rib. Smooth liver edge felt just below the costal margin. Spleen palpable. *Local.* Over the coccyx was an area three by two inches of coarse red skin containing two openings, the lower and larger about 1 cm. wide. Pus flowed freely from both on pressure. A probe could be readily passed from one opening to the other and in a downward direction three or four inches below the lower opening. The probe could be felt through the rectum at the lower end of the tract, but there was no communication. Manipulation caused no pain. Healed indurated areas over the right internal malleolus and on the right buttock. *Genitals, extremities* and *reflexes* normal. *Pupils.* Reactions to light very sluggish.

Before operation *T.* 98.1°-101.1°, *P.* 90-108, *R.* 23-32, amount of *urine* not recorded, cloudy, amount insufficient for sp. gr. test, a slight trace of albumin at the one examination, sediment loaded with leucocytes; *blood* not recorded. *Wassermann* strongly positive. *X-ray.* Plates of the sacrum, coccyx and sacroiliac region showed no definite evidence of bone pathology. There was a group of irregular small dense shadows in the pelvic region which suggested calcification in a group of glands, or might be calcification in a uterine tumor.

August 4 operation was done. The patient made a good ether recovery. There was considerable foul discharge from the wound, which however by August 7 looked in fairly good condition. Balsam of Peru was applied. By advice of a syphilis consultant mercury by mouth was started August 10*. August 7-11 the temperature was normal; from the 12th however it ranged from 98.4° to 101°, the pulse from 90 to 112. August 16 another Wassermann was strongly positive. August 17-18 the temperature was down. August 20 it rose to 103° without discoverable cause. Phenol mixture was used on the wound. August 24 the temperature was down to 100°. A tumor was felt in the left flank. It was thought possibly a hernia through Petit's triangle, but felt like something more. A culture from the discharge from the wound showed a slight growth of staphylococcus. A smear showed two or three Gram-positive cocci per oil immersion field. The wound looked clean. The patient continued to run an afternoon temperature of about 100°.

August 28 a second operation was done. She made a good recovery from anesthesia. The temperature was normal. There was a moderate amount of discharge from the wound, which was somewhat reddened. September 1 the temperature rose to 102.8°. It was down the next day. Boric compress dressings were used. September 6 the stitches were removed, as some of them were becoming pussy, with reddened areas around them. The wound was strapped with adhesive. By advice of a skin consultant Alpine lamp treatment was tried. The patient appeared to be going downhill rapidly. Her breath had an ammoniacal odor.

September 19 600 c.c. of blood was transfused. She rallied somewhat after the transfusion, but soon relapsed into her former condition of hypothermia and semi-coma. The pulse rose to 152 and the respirations to 50, with no rise of temperature. That day she died.

## DISCUSSION

### BY DR. EDWARD L. YOUNG, JR.

We can very quickly array in our minds the various things that are going to make trouble in persistent suppuration, either in a sinus or an open sore. This list includes tuberculosis, syphilis, cancer, some of the special infections like actinomycosis, local lowered resistance such as influenza, varicose ulcer, poor general resistance as in marked anemia or diabetes, and mechanical causes such as poor drainage, as in persistent sinus from empyema, or from an ischiorectal abscess that is not well opened. Those include, I should say, almost ninety-nine per cent. of persistent sepsis. Rarely we see a case without any obvious lowering of general condition or obvious cause in which a suppurative area will persist for a long time.

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*Corrosive chloride of mercury gr. 1/16, extract of licorice gr. 1 —one tablet four i. d.

This report of the heart examination is written in medical English. Translating it into surgical I should say it was a fairly good heart with a slightly damaged myocardium.

DR. R. C. CABOT: It ought to be big, because of the percussion. That is all.

DR. YOUNG: The first thing we think of, from the local examination, is to put this case into the class of poorly drained septic areas. It sounds as though a sore starting as a pressure or bedsore had, because of poor drainage, worked down through the submucosa in the way an ischiorectal abscess becoming a fistula will often behave. Of course this does not prove that there was no communication with the rectum, because very often where there is a known fistula we cannot find the opening easily.

This urine examination is not worth the paper it is written on because it is not a catheter specimen.

DR. HOLMES: I do not think the x-rays are worth going over. We might suggest that the shadow instead of being a fibroid may be calcification in a sinus tract. I do not think these shadows have much bearing on the case, but they may be of some interest in x-ray interpretation. I think it is much more likely that that was a collection of pus in the pelvis than a fibroid.

DR. YOUNG: How would you distinguish those from the phleboliths that are seen so commonly?

DR. HOLMES: Those shadows are more dense and more in the median line than the usual phlebolith. Probably in the interpretation we did not know that the patient had a sinus.

DR. YOUNG: It would seem then as though this might have three different factors influencing it. It is a poorly drained area that is undermined; it has perhaps got communication with the rectum, which is conveying sepsis to it; and there is poor general condition. The question whether a strongly positive Wassermann has anything to do with it or not has been gone over already in these exercises. So far as there is any evidence given us we cannot believe the influence of that strongly positive Wassermann on the healing of these lesions is very great, especially where there were apparently other causes for it.

As far as I can see the only thing is to open it up thoroughly, curette away any hard fibrous tissue. If it does communicate with the rectum it has to be opened up widely and the whole thing packed and allowed to granulate from the bottom.

### DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Abscess of sacral region.

### PRE-OPERATIVE DIAGNOSIS, AUGUST 4

Abscess of sacral region.

### OPERATION

Gas-oxygen. Long linear incision extending from the buttock to the third lumbar vertebra. The sinus was found to undermine the skin over the buttocks widely. The skin was incised down over the left buttock and a large amount of pus escaped. The abscess cavity was then found to extend upward back to the level of the third lumbar vertebra. The skin incision was extended up to this point. The sloughing tissues were removed. The wound was packed wide open with dry gauze.

### FURTHER DISCUSSION

When all this is done we have to remember that the virulence of the organism in its relation to the resisting power of the patient is after all the thing that is going to tell the story. If the patient is strong enough, with the help of good drainage, to throw off the infection that is all there is to it. But in certain cases in spite of all the help that surgery can give the infection will spread.

Evidently the South Medical consultant did not think this was anything very extensive, although they started treatment.

Whether the tumor felt August 24 was the spreading of sepsis of course it is impossible to say just on the mere statement. They thought it was not, but was possibly a hernia.

I do not believe the smear is worth anything in a wound that has been draining as long as this.

Here we miss what they had in the ward, and that is the patient. From this story, of course, we cannot say why a second operation was done. They must have had evidence of the spread of the sepsis or of metastases somewhere. That is, whether or not this tumor that they felt in the abdomen has developed so that they think it is sepsis or so that they know the wound is undermined I do not think we have any right to say. But as I read the story, it is just a question of a spreading sepsis in a person below resistance.

### DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Sepsis.

### PRE-OPERATIVE DIAGNOSIS, AUGUST 28

Wound of sacrum.

### OPERATION

Gas-oxygen. The skin was undercut around the wound, the surface scraped, and the wound edges sewed together.

### FURTHER DISCUSSION

They thought everything was going all right. This was simply an attempt to get third intention healing. Apparently this afternoon temperature was not taken as seriously as I was taking it in the discussion.

I am going to say she died of sepsis. Whether there is sepsis in the lungs to go with that rise of respiration I think it is impossible to say. I do not know where to say the sepsis will be found unless the mass described is an abscess. It is fairly possible that there will be nothing to show for it. Of course a backward look is always better than a forward look, and I think with the story of the temperature it was a poor idea to suture this wound. It would have been better to take more time, to give her the chance to get stronger.

**Dental Surgeon**: The poor teeth mentioned in the physical examination might be a focus.

**Dr. Young**: A focus of infection to have kept up the sepsis?

**Dental Surgeon**: Yes. I should think that might be a very important item in it, along with the pyorrhea.

**Dr. Young**: That is a suggestion. I do not think I have ever known teeth to be involved in sepsis in just that way. I have assumed they were a focus for toxic absorption rather than a cause of an actual suppurative process.

**A Surgeon**: Would it be your opinion that this bedsore was the original cause?

**Dr. Young**: I think it started as a bedsore, then poor general condition and poor drainage with the resulting sepsis.

**A Physician**: We do get remote effects from local causes such as dental conditions manifesting themselves in remote regions. I wonder why something was not done about that focus in the mouth.

**Dr. Young**: They probably thought the other condition was much more important.

**A Physician**: Don't you lay a good deal of weight upon sluggish pupils and two positive Wassermanns?

**Dr. Young**: It is strongly suggestive of syphilis, certainly. But I doubt if they have any importance in the delayed healing of the wound.

**A Physician**: Is there a question of kidney condition? What does the ammoniacal odor signify?

**Dr. Young**: I think it signifies that her metabolism is shot to pieces. If you mean to ask whether it is a uremic condition, I do not think there is any proof of that.

### CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Chronic nephritis.
Syphilis.
Abscess of sacral region.
Incision and drainage of sacral abscess.

### DR. EDWARD L. YOUNG'S DIAGNOSIS

Chronic sepsis.

### ANATOMICAL DIAGNOSIS

1. *Primary fatal lesions*

Retroperitoneal abscess.
Abscess of the left kidney.

2. *Secondary or terminal lesions*

Arteriosclerotic degeneration of the kidneys.
Chronic cystitis.

3. *Historical landmarks*

Obsolete tuberculosis of the apex of the right lung.
Chronic pleuritis of both lungs.
Cholelithiasis.
Myomata of the uterus.

**Dr. Richardson**: In the sacral region there was a large abscess extending from the pelvic brim to the left kidney region. It is recorded that the pus was very foul.

There was some enlargement of the glands, but no definite lesions were found. A few old adhesions were found in the pleural cavities. The bronchial lymph nodes were a little enlarged, but were otherwise negative. The lungs showed a small pigmented fibrous patch in the region of the apex on the right, but were otherwise negative.

The heart weighed 355 grams, which was good weight for this patient. It was a little hypertrophied as shown by the measurements of the walls,—four to five mm. on the right, 14 mm. on the left. The valve circumferences were of the usual size and there was no endocarditis. The coronaries were free, the aorta negative, with no evidence of aortitis.

The gall-bladder contained two small stones but showed a good mucosa. The bile-ducts were free. The spleen was a little large, 205 grams. The left kidney weighed 120 grams, the right 115. They were rather small but showed a good width of cortex. The markings were a little indistinct, but there was no definite evidence of chronic nephritis. The sacral abscess extended into the region of the left kidney and at that point had eroded the first and second lumbar vertebrae, and in the parenchyma of the left kidney there were several small abscesses. There was no pus in the right kidney.

There were a few small fibromyomata of the uterus.

Dr. Young: Was that a frank perinephritic abscess?

Dr. Richardson: As it reads here it is exactly such a case as you have described,—an extension of an infection originally starting in the buttocks, extending up in the region of the left kidney, eroding the vertebrae mentioned and with a few abscesses in that kidney.

There was a question apparently in the minds of the investigators whether or not this was tuberculosis. I can find no evidence of tuberculosis in the sections, so far as they go. So that anatomically this case seems to be one of infection extending up and involving the left kidney in the form of abscesses. The kidneys showed no definite nephritis.

At one point in the notes it is stated that the apex of the heart was firmly bound to the parietal pericardium. That of course means a certain area of chronic pericarditis.

Dr. Cabot: Were the lungs all right?

Dr. Richardson: There was nothing in the lungs except that patch of presumably old tuberculosis.

Dr. Young: Was any culture taken of the abscess?

Dr. Richardson: None is recorded.

Dr. Young: I think this is interesting as showing the patient's lowered resistance, in the lack of tenderness in the feeling of this mass. They must have handled it fairly vigorously, and they put it down as possibly a hernia; yet they were feeling an abscess which in a person of normal resistance would have been pretty tender. Apparently with her it was not tender enough so that they even considered going after the pus.

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## Current Literature Department

### ABSTRACTORS

Isador Coriat
Ernest M. Daland
Horace Gray
Robert M. Green
John B. Hawes, 2d.
John S. Hodgson
Fred S. Hopkins
Gerardo M. Balboni
William B. Breed
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Edward H. Risley
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William H. Shedden
Warren R. Sisson
George G. Smith
John B. Swift, Jr.
Wilder Tileston
Henry R. Viets

### Further Observations on the Use of the Cautery in Peptic Ulcer

Balfour, Donald C. (*Annals of Surgery*, August, 1923), reports on the use of the cautery in 725 cases of peptic ulcer. This experience has shown the types of ulcer to which the cover is most applicable, contra-indications to its use, the most effective way of utilizing it, the risk of operation, and its end-results.

Gastric ulcers can be arbitrarily divided into three groups: (1) those in which the crater is 1 cm. or less in diameter, (2) those between 1 and 2 cm., (3) those over 2 cm. The cautery was first suggested for the first group since it was commonly observed that after knife excision of such small lesions the remaining opening was out of all proportion in size to the lesion removed. Ninety per cent. of all gastric ulcers involve the lesser curvature, and since a large percentage are small, the cautery has a wide applicability.

Pacquelin, or electric cautery, is placed in the crater until the ulcer is completely destroyed, the opening is closed with chromic catgut sutures, and this procedure is followed by a gastro-enterostomy.

Ulcers with medium-sized craters, *i.e.*, between 1 and 2 cm. in diameter, may be malignant without visible evidence. Because of this possibility, the crater should be exposed to view by opening the stomach and an excision made by the cautery knife. When ulcers of this size are nearer the pyloric end of the stomach and can be easily mobilized, partial gastrectomy is the operation of choice, but if they are distant from the pylorus, experience has shown that local excision by cautery and gastro-enterostomy give such excellent results with such a small operative mortality that one hesitates to employ an operation of distinctly greater risk. Cautery excision combined with gastro-enterostomy has been performed in the Mayo Clinic in 329 cases of gastric ulcer with a mortality of 2.12 per cent. In one series of 148 consecutive cases, there was no postoperative mortality. Eighty per cent. of the cases reported satisfactory results from the operation. Fourteen per cent. were only slightly improved, and 4 per cent. failed to derive any relief, and 1.1 per cent. are known to have developed ulcers subsequently.

The fact that in 725 cases no evidence of tendency for an ulcer to develop at the point of excision would disprove any fear that the cautery itself may give rise to ulcer.

This paper is a concise and well-presented paper and very much worth reading. [E. H. R.]

### Pancreatic Asthenia as a Post-Operative Complication in Patients with Lesions of the Pancreas

Whipple, A. O. (*Annals of Surgery*, August, 1923), states that:

1. There is a group of symptoms appearing as a post-operative complication in patients with pancreatic lesions, characterized by asthenia, anorexia, nausea and vomiting, low blood pressure and rapid loss of weight.
2. In a series of 18 cases reported, definite pathology of the pancreas was determined in 17 either at operation or post mortem.
3. The asthenia, anorexia, low blood pressure and loss of weight are not dependent upon malignancy, inasmuch as 12 of the 18 cases reported showed pancreatitis rather than carcinoma.
4. The involvement of the pancreas increases to a marked degree the hazard of biliary surgery.
5. The inflammatory lesions and calculus formation limited to the gall-bladder should be treated surgically before the process of inflammation extends to the pancreas. [E. H. R.]

### The Phosphorus and Calcium of the Blood in Renal Disease

De Wesselow (*Quar. Jour. of Medicine*, July, 1923) obtained very interesting results from a study of inorganic phosphorus and the calcium of the blood in nephritis. He found retention of P. in seven cases. This ran parallel with the retention of urea on the average, though marked discrepancies were met with in individual cases. A marked retention of F. was found to be of very bad omen, all of his cases which showed more than 10 milligrams (the normal figure is 2 to 4 mg.) ending fatally within a short time.

A retention of phosphates was more closely related to symptoms of uremia than was that of urea, and was of greater significance from a prognostic point of view.

The author discusses the question whether this relation to uremia is due merely to faulty excretion, or to toxicity of the retained phosphates, but is unable to decide. The blood picture is similar to that seen after the experimental administration of phosphates, but the evidence with regard to the toxicity of phosphates is inconclusive.

The calcium of the serum varied inversely with the phosphorus, and in several cases fell to figures as low as those met with in tetany. Such cases showed tremors and twitchings, but Chorstek's and Trousseau's signs were absent. They all died. There was no relationship between a low calcium and the occurrence of convulsions. Attempts to raise the serum calcium by the administration of calcium salts were unavailing. [W. T.]

### RELATIONSHIP OF FAT-SOLUBLE A VITAMIN TO RICKETS

GALBRAITH (*Quar. Jour. of Medicine*, July, 1923) made an extensive investigation of the incidence of rickets in infants fed on fat-sufficient and fat-poor diets. His results indicate that a deficiency of fat-soluble A has nothing to do with the etiology of this disease. Rickets developed somewhat more frequently in babies on the fat-sufficient than in those in the fat-poor diet: Investigation of the diet of 28 young babies showed no deficiency of fat in 78 per cent. As to treatment, definite radiologic improvement followed the use of cod-liver oil in almost all cases, but clinical improvement was not equally marked, and was sometimes slight. Similar results were noted from the use of violet rays and massage; the most marked clinical improvement was obtained with massage. [W. T.]

### THE ETIOLOGY AND IMPORTANCE OF THE CYSTICO-DUODENO-COLIC FOLD

NAGEL, G. W. (*Surg., Gyne. and Obstet.*, September, 1923), writes as follows:

1. A cystico-duodeno-colic ligament is present in a small percentage of persons.
2. The ligament is a part of the lesser omentum and therefore of congenital origin.
3. Under normal conditions the ligament probably produces no symptoms and therefore requires no treatment.
4. The ligament is, however, a source of danger in that it represents a potential adhesion ready to thicken and shorten in response to neighboring pathological processes, and to furnish a guide and stimulus to the formation of true adhesions.

[E. H. R.]

### ENDOCARDITIS LENTA (CHRONIC ULCERATIVE ENDOCARDITIS)

COOMBS (*Quar. Jour. of Medicine*, July, 1923) reports on 30 cases seen in civil practice since the war. Striking differences were found on comparing them with pre-war cases. Thus 29 of the 30 were males, while previously no such preponderance of the male sex was noted; of these 29, no less than 22 served in the army during the war. An analysis of 33 other cases in ex-service was unusually long (about three years). They were almost without exception men of fine physique. The author is led to the conclusion that excessive fatigue while in the army was an important etiological factor, and explained the increased incidence of the disease since the war.

Other points of difference were the comparative rarity of previous rheumatic heart disease, and the fact that 80 per cent. showed a predominant aortic lesion, while the mitral valve was chiefly involved before the war.

The course of the disease was for the most part afebrile, with occasional slight rises of temperature, and bacteria could not be cultivated from the blood during life, and only with difficulty from the vegetations on the valves. [W. T.]

### OVARIAN HEMATOMATA

BLAIR, E. M. (*Surg., Gyne. and Obstet.*, September, 1923), writes as follows:

1. Perforating and especially recurrently perforating hematomata of the ovary are probably all developmental uterine epithelium implantations.
2. The great majority of hematomata which do not perforate but may still cause menstrual symptoms and abdominal pain, are follicular, corpus luteum, or stromal in origin.
3. The same stimuli needed to carry follicular corpus luteum and stromal cysts of the ovary on the pathological entities, act, we believe, on implanted uterine epithelium to carry it on to mature endometrial tissue, cyst formation, and perforation.
4. Recurrent attacks of abdominal pain in the female pelvis, during the child-bearing period, may simulate appendicitis but be caused by a recurrently perforating hematoma of the ovary of endometrical origin.
5. Sampson's theory of origin of perforating ovarian hematomata, while still without substantiation as far as we know, is a plausible theory. In view of that fact the notice of the profession should be drawn to the added complication which may arise from a uterus in mal-position. [E. H. R.]

### EXPERIMENTS ON THE INFECTIOUS ORIGIN OF THROMBO-ANGIITIS OBLITERANS AND THE ISOLATION OF A SPECIFIC ORGANISM FROM THE BLOOD STREAM.

RABINOWITZ, H. M. (*Surg., Gyne. and Obstet.*, September, 1923), writes as follows:

The following conclusions have been arrived at, to be checked up by additional blood cultures:

1. The bacillus isolated produced the same lesion in the ears and feet of the rabbit as that which was present in the calf of the leg of the human being.
2. The lesions produced were similar in their gross and microscopic pathology to that produced in the disease known as thrombo-angiitis obliterans.
3. This bacillus was isolated both from the blood of the local affected portion and from the general blood stream.
4. The organism was distinctly hemaglobinophilic.
5. The bacillus could not be isolated from the body of the leech, therefore eliminating the normal habitat of this organism within the leech.
6. Normal hemolyzed serum (per leech) produced no lesion in the rabbit's ear. The bacillus was, therefore, responsible for the production of the gross lesions.
7. The clear non-hemolyzed serum derived from the unaffected veins in the elbow in the specified case, produced no lesion in the rabbit's ear. May I venture this explanation: that the bacillus requires hemolyzed blood for cultivation and isolation from the blood stream.
8. Though a bouillon culture produced considerable reaction in the ear of Rabbit 4, the culture con-

taining the solid content of blood, activated the bacillus sufficiently to produce a typical gangrenous lesion in the other ear of Rabbit 4.

9. The appearance of lesions on the plantar surfaces and toes of three rabbits, five weeks after inoculation, showed conclusively the entrance of this organism into the general blood stream and, furthermore, a specific tissue predilection.

10. The organism isolated in pure culture from the blood of Case 4 produced a similar gross lesion in the rabbit's ear. [E. H. R.]

## AN ELECTRO-CHEMICAL INTERPRETATION OF SHOCK AND EXHAUSTION

CRILE, G. W. (*Surg., Gyne. and Obstet.*, September, 1923), writes as follows:

1. There is much evidence in support of the conception that man and animals are electro-chemical mechanisms constructed on the pattern of the constituent cells, each of which in itself is an electro-chemical mechanism.

2. In accordance with this conception:

(*a*) Cells have the power of oxidation only as long as there is a difference in potential between the nucleus and the cytoplasm; a difference in potential is maintained only as long as there is oxidation.

(*b*) The nucleus of the cells as compared with the cytoplasm is positive; the cytoplasm as compared with the nucleus is negative. The brain as compared with the liver is positive; the liver as compared with the brain is negative.

(*c*) Since electricity flows from a higher to a lower potential and since oxidation in the brain is the highest, we may suppose that the oxidation electrical wave would pass down the nerves from the area of higher potential in the brain to the areas of lower potential in the muscles and glands, and since the liver has the lowest rate of oxidation—hence the lowest potential—the current would finally reach that area, whence it would return through the electrolytic system to the brain, thus completing the circuit.

3. The following facts are interpreted by the hypothesis that the body as a whole is an electro-chemical mechanism, the positive pole being the brain, the negative the liver, the connecting wires the nerves, the salts in solution the electrolytic fluid in which the electro-chemical mechanism is immersed.

(*a*) When either pole, *i.e.*, the liver or the brain, is removed or destroyed, the organism perishes.

(*b*) If the difference in potential within the cells, no less than the difference in potential between the poles (the liver and the brain), is dependent on the supply of electricity by oxidation, then it follows that, if the organism is deprived of oxygen, the existing difference in potential within the cells and within the organs is lost and equilibrium, or death, is established.

(*c*) The facts (1) that water is a non-conductor and a solvent whereby the atoms within the colloidal solutions of which the cells are composed are enabled to take on electrical charges or to become ionized; and (2) that ionization is essential for electrical communication, suggest the essential rôle of water in living processes.

(*d*) Since the speed of chemical action and the electrical conductivity are fundamentally controlled by heat and cold, it follows that in an electro-chemical mechanism there must be an optimum temperature as well as a lethal cold and a lethal warm temperature. Abdominal surgery in the colder months in unwarmed front area huts illustrated this point by a forbidding mortality rate.

(*e*) The opposite effects of stimulation and of exhaustion on the temperature and on the electrical conductivity of the brain and of the liver, the muscles and other tissues in the splanchnic area, would be explained by the conception that the driving power depends upon the difference in potential between the brain and liver, muscles, and other organs. Hence, if a stimulus caused only the potential of the brain to rise and the liver remained unchanged, the difference in potential, hence the driving power, would be correspondingly less.

4. The electro-chemical theory would interpret the specific antithetic action of adrenalin upon the temperature of the brain and of the liver and other organs in the splanchnic area.

5. It would interpret the increase in electrical conductivity of the brain by iodine, iodoform, and thyroid extract (hyperthyroidism); and the decreased conductivity of the brain after thyroidectomy.

6. It would interpret the interference with digestion by the strong emotions, by injury, by pain, by infections, etc., for the splanchnic processes are inhibited while the brain is stimulated. It would interpret the antithetic effects of fear and faith, and the failure of health in man and animals under the stress of chronic fear or anger or other strong emotions.

7. This theory would suggest that the essential function of sleep is to provide a period during which, in the batteries which drive the organism, the difference in potential decreased by the activities of the day, is restored.

8. It would interpret the fact that in surgical operations, if a state of negativity and the internal respiration are maintained, there is no surgical shock.

9. The state of negativity is maintained by:

(*a*) Exclusion of fear by management, by operation in the patient's room, by morphine, by analgesia;

(*b*) Exclusion of traumatic stimuli by local or regional anesthesia, by gentle handling, by protection of the wounds from the irritation of the air;

(*c*) Exclusion of stimulation by stimulant drugs.

10. The entire process whereby the state of negativity is secured and the internal respiration—difference in potential—of the cells is maintained is included in the combination of methods of pre-operative and post-operative management and of surgical technic, which is called anociation. The internal respiration is maintained by fluids, by warmth, by blood transfusion, by rest, by sleep, and by the avoidance of deep inhalation anesthesia.

11. Finally, and included in the above, the theory that man is an electro-chemical mechanism interprets many of the phenomena of life [E. H. R.]

## SEROTHERAPY AND VACCINOTHERAPY IN SURGICAL INFECTIONS

BAZY, DR. LOUIS, Paris (*Surg., Gyne. and Obstet.*, September, 1923), presents a very elaborate article on this rather neglected subject. He speaks of the advantages and disadvantages, gives general indications, speaks of reactions and reasons for failure, and especially believes that there is a definite place for the employment of local serotherapy. [E. H. R.]

## MOBILIZATION OF ANKYLOSED JOINTS

MACAUSLAND, W. R. (*Surg., Gyne. and Obstet.*, September, 1923), presents a beautifully illustrated article of 154 pages on this interesting subject. He claims that arthroplasty is not an excision. He goes thoroughly into the types of ankylosis, causes and extent, indications and contraindications for arthroplasty, gives a very good historical sketch of past experimental and present methods, and then takes up in detail the technic of arthroplasty of the elbow, the knee, wrist, hip, jaw, shoulder, fingers, ankle, and metatarso-phalangeal joints.

There is a bibliography of 199 references. The article is extremely thorough and well presented.

This article is followed by another shorter but equally valuable article by Dr. P. Santy of Lyon, France, these two articles forming a very good symposium on this subject. [E. H. R.]

### Radiotherapy in Gynecology

Haultain, W. F. T. (*Edin. Med. Jour.*, July, 1923), discussing radiotherapy, gives the indications and contraindications. He points out the effects of radiotherapy in the different gynecological conditions.

[R. C.]

### The Paralysis of Pott's Disease and an Operation for Its Relief

Fraser, J. (*Edin. Med. Jour.*, Sept., 1923), summarizes his operation to relieve cases of paralysis secondary to Pott's disease as follows:

The operation entails simple division of the laminae of the affected vertebrae with division of one or two laminae above and below the site of the lesion.

The operation is invariably followed by an early and progressive improvement in the paralysis, and, if care is continually exercised in the postoperative recumbency treatment, the recovery is a complete and a permanent one. No weakening of the spine follows the operation. This report is based upon the records of four cases, in all of which the operation was successful, though in one instance want of care in the post-operative treatment resulted in a temporary relapse.

The outstanding advantage of the operation is that it appears to relieve a spinal pressure which is maintaining the long-standing paralysis, and which, if unrelieved, may result in spinal degeneration changes.

[R. C.]

### Trauma as a Possible Cause of Brain Tumor

Reynolds, E. S. (*The Lancet*, July 7, 1923), discusses trauma as a possible cause of brain tumor. He gives the literature on the subject, and urges that others will make full inquiry regarding comparatively recent injuries to the head in cases of brain tumor.

[R. C.]

### Insulin

Macleod, J. J. R. (*The Lancet*, July 28, 1923), discusses insulin in a most interesting article. The whole of this is well worth reading.

[R. C.]

### A Critical Investigation into the Thermal Death-Point of the Tubercle Bacillus in Milk

Campbell, F. W. (*The Lancet*, Aug. 18, 1923), discussing a most interesting investigation into the thermal death-point of the tubercle bacillus in milk, with special reference to its application to practical pasteurization, draws the following conclusions:

1. It has been shown that by using 25 strains of the tubercle bacillus no wide difference in the thermal death-point is found.
2. The thermal death-point of this organism is practically similar for human and bovine types.
3. The previous wide variations in results have been due to too little care in carrying out the experiments, and to the fact that the lesions caused in test animals had not previously always been given sufficient time to develop and be accurately diagnosed.
4. If a temperature of 60° C. be used, it requires 20 minutes' exposure to this degree of heat to prevent milk so treated carrying infection to the guinea-pig.
5. If a temperature of 70° C. be used, it requires five minutes' exposure to ensure the same results.
6. Of these two combinations of time and temperature factors, the former excels the latter, when the *food value* of the treated milk is also considered.
7. The writer is of opinion that, until bovine tuberculosis can be stamped out at its source—namely, in the ox—proper pasteurization of milk is the only safe method of rendering milk safe as a diet for human consumption.

[R. C.]

### Chronic Mastitis

Keynes, G. (*The Lancet*, Sept. 1, 1923), discussing chronic mastitis, states that the best results seem to be obtained by the judicious application of x-rays. If the proper dosage is applied by an expert, a single treatment will usually have a most satisfactory effect. By this means the secretory activity of the epithelial cells is inhibited or destroyed.

[R. C.]

### Marriage, Pregnancy, Parturition, and Tuberculosis

Ward, E. (*The Lancet*, Sept. 15, 1923), summarizes his remarks on the risks of maternity in tuberculous women as follows:

We find that a tuberculous woman loses nothing by marriage alone. It is unlikely to affect her either way; if it does affect her it is more than twice as likely to improve her condition as to cause deterioration. Pregnancy and parturition are likely to make her worse; there is, however, only a 50 per cent. chance of this against a 19 per cent. chance of improvement. But the children are seven times as likely to be tuberculous as those of healthy people.

[R. C.]

### Observations on Fifty Cases of Carcinoma of the Cervix Treated with Radium

Donaldson, M., and Canti, R. G. (*Brit. Med. Jour.*, July 7, 1923), reporting on 50 cases of carcinoma of the cervix treated with radium, are of the opinion that in the majority of cases patients suffering from carcinoma of the cervix cease to have hemorrhage, vaginal discharge, and ulceration after treatment with radium. Further, that in some of those cases which are inoperable, life is prolonged and the patients are enabled to lead useful existences.

[R. C.]

### Ventricular Fibrillation and Sudden Death

MacWilliam, J. A. (*Brit. Med. Jour.*, Aug. 11, 1923), discussing death from ventricular fibrillation, believes that what really happens in the supervention of ventricular fibrillation is a misapplication of contractile energy thrown away in a turmoil of fruitless activity, a disastrous change occurring in muscle that may be already more or less limited in power, or that may, on the other hand, be possessed of vigor more than sufficient for the ordinary needs of the circulation. This often occurs in a heart showing no failure of rhythmicity, excitability, or contractility.

[R. C.]

### The After-Effects of Certain Industrial Injuries, and Their Treatment by X-Rays

Morrell, R. A. (*Brit. Med. Jour.*, Sept. 15, 1923), urges the value of x-ray therapy following certain forms of industrial injury, such as injuries involving the tendons of the wrist or fingers, extensive lacerated wounds or burns of muscle, and even the less serious condition of teno-synovitis. He believes that the final results of suitable x-ray treatment are better and more quickly obtained than by the older and more usual methods of massage, movement, and negative electrolysis.

[R. C.]

### VARIATION IN THE LIMITING HYDROGEN-ION CONCENTRATION OF STREPTOCOCCI

LOUIS BRODY AND LOYD ARNOLD (*Journal of Bacteriology*, July, 1923) tested the limiting hydrogen-ion concentration of streptococci in the hopes of finding a new criterion for the differentiation of types of the organism. The extreme limits observed were from 4.2 to 5.5. Individual strains isolated from a single wound, however, varied almost as much as this, in one instance from 4.8 to 5.5. They conclude, therefore, that this method offers less constant results than the recognized sugar fermentation methods.

[T. B. M.]

### CLOSTRIDIUM PUTRIFICIUM, II. A MORPHOLOGICAL, CULTURAL, AND BIOCHEMICAL STUDY

GEORGE F. REDDISH AND LEO F. RETTGER (*Journal of Bact.*, July, 1923) describe the morphologic and metabolic characteristics of this obligate anaerobe, the importance of which was recognized in the infected wounds of the World War They conclude that it is a well-defined species which can be accurately recognized by the properties outlined.

[T. B. M.]

### DIETETIC TREATMENT IN DIABETES MELLITUS

CAMPBELL, W R. (*Canad. M. A. J.*, vol. 13, No. 7, July, 1923), discusses the principles underlying the dietetic treatment of diabetes mellitus. These are equally applicable to the treatment of diabetics with insulin and it is emphasized that without attention to proper dietetic regimes insulin is capable of much harm. For the patient who can live on a properly balanced, adequate diet, insulin is available to protect him from emergencies arising in his disease. Types of diets are discussed and a simple method of calculating a standard diet for diabetics is suggested, together with its application in treatment.

### CARBON TETRACHLORID IN DERMATOLOGY

ALDERSON, H. E. (*Archiv. of Derm. and Syph.*, vol. 8, No. 3, September, 1923) has reviewed the references in the literature to carbon tetrachlorid or tetrachlormethane ($CCl_4$), which for dermatological use must be a "double rectified" preparation as the commercial product contains chlorin or sulphur, has a disagreeable odor, and is very irritating to the skin. It is recommended that it be kept in brown glass bottles, away from the light. A piece of chalk the size of a nut should be placed in a bag of gauze in the bottle containing one liter. Traces of sulphur will be carried down by the chalk as calcium sulphid. Unpleasant results are avoided if a pure double rectified preparation is used. It was found that the preparation is a good antiseptic, and that this quality is greatly aided through its strong affinity for fatty substances. It penetrates deeply into the sebaceous gland ducts and hair follicles, dissolving in it, for instance, iodin, bromin, camphor, and many of the essential oils. A 3 per cent. solution of iodin in tetrachlormethane makes a useful penetrating, antiseptic solution

As a parasiticide, it is effective, killing pediculi and many other insects instantly. Its greatest use is found in local treatment of various seborrheal conditions.

The pure drug is a good cleanser, penetrating gland ducts and hair follicles readily. Sometimes the replacement of half the rose water in lotio alba with tetrachlormethane has a good effect. The latter does not go into solution with aqueous preparations, but this does not interfere greatly with its local action in acne.

Tetrachlormethane is very useful as a fat solvent, especially as it is not inflammable as are ether, benzene, and chloroform. It is relatively inexpensive, readily obtained, and for both these reasons it at least partially replaces alcohol for local use and as a solvent in prescriptions.

[A. W. C.]

### THE SEPTIC FACTOR IN THE THREE GREAT PLAGUES.

MAYO, WM. J. (*Canad. M. A. J.*, vol. 13, No. 8, August, 1923), points out that of the many features common to tuberculosis, syphilis, and cancer, the most important is their relation to the lymphatics.

The reactions of the great infections, one on another, when in combination, which occurs not infrequently, are disastrous, especially if sepsis co-exists. Patients with tuberculosis seldom die from the disease itself, except in the presence of meningitis, when the inflammatory products of the specific infection are under pressure; the greater number die from the associated sepsis. Patients with syphilis may die from terminal tuberculosis The buccal leukoplakia of syphilitic origin leads to chronic septic irritation in which carcinoma may develop. Sepsis is a common and unfortunate secondary infection of syphilis, tuberculosis, and carcinoma, causing great distress to the patient and shortening of life. Sepsis is also a factor in the visibility of the manifestations of tuberculosis, syphilis, and carcinoma. Persons of cleanly habits may have little or none of the hardness in the base of the chancre which is due to sepsis, and the manifestations of syphilis in the clean may be extremely mild. According to Corner, the unclean are more likely to have prominent display of primary and secondary syphilitic lesions with consequent early diagnosis, and the advantages of early treatment. If carcinoma of the internal organs the disease may progress with little or no pain because of the absence of sepsis, in marked contrast with the open septic conditions of external carcinoma, which explains the common conception of the laity that death from carcinoma means being eaten alive. While sepsis is due to a secondary invader it is of the greatest importance in a study of these plagues.

[A. W. C.]

### LIVING SUTURES IN THE TREATMENT OF HERNIA

GALLIE, W. E. AND LEMESURIER, A. B. (*Canad. M. J.*, vol. 13, No. 7, July, 1923), by means of experimental research extending over several years have demonstrated that strips of fascia constitute an ideal suture material for use in operations in which it is desired to hold together structures, such as the edges of hernial rings, which naturally tend to separate. It remains only for the surgeon to employ a technic which ensures that the suture is solidly anchored into unyielding tissue, such as healthy muscles and aponeurosis, and to make sure that a sufficient quantity of the suture is employed to withstand the anticipated strain and to completely fill the gap where the edges cannot actually be drawn together. The advantages of the living sutures are: Over catgut and similar sutures they have the great advantage that they are not absorbed and that they continue for all time to perform the function for which they were originally intended. Over silk and other nonabsorbable materials they have the advantage that they are composed of living tissue which is perfectly non-irritant, and that they heal solidly into the structures through which they pass without showing any tendency to cut when subjected to ordinary physiologic strain. In operations designed to close gaps in which the edges cannot be drawn together the living sutures have advantage over patch transplants in that they do not depend for their success on the process of healing by scar tissue, but solely on the mechanical grip which they obtain on the edges of the ring. By weaving the sutures across the gap, as in the darning of a sock, a wall of great strength can be constructed which can be depended on to resist successfully any ordinary degree of intra-abdominal pressure and any ordinary muscular strain.

[A. W. C.]

## Acute Osteo-Myelitis

Forbes, A. M. (*Canad. M. A. J.*, vol. 13, No. 8, August, 1923), discusses this subject in detail, and advises as regards treatment, immediate relief of tension and cutting down on the bone as soon as the diagnosis is made If three to four days have elapsed since the onset, pus will be found beneath the periosteum. He is inclined to adopt Clarence Starr's suggestion and to drill through the bone in order to secure greater drainage of the subcortical tissues. If pus be not found beneath the periosteum, one should anticipate its collection there by drilling towards the probable seat of the infection through the cortex into the subcortical layers of the diaphysis near the metaphysis. He believes in creating an area of least resistance by drilling four or six canals through the cortex in the direction stated. This seems to be the practice of Starr, and should be followed.

It is not necessary to chisel into the medulla in the early days of this infection, because in classical cases it takes two to three weeks for the infection to reach that cavity.

[A. W. C.]

## The Use of the Wassermann Reaction in the Diagnosis of Syphilis

Scott, G. O., Pearson, C. M. and G. H. J. (*Canad. M. A. J.*, vol. 13, No. 7, July, 1923), consider that the Wassermann reaction if properly interpreted, is one of our most useful diagnostic measures to determine the pressure of syphilis in a patient, but it should be remembered that it is only a symptom and may be absent even in the presence of syphilis. In interpreting reports, the following should be borne in mind: The Wassermann reaction may be negative during the primary stage, and cannot be used as a diagnostic measure at this period. This is of great importance because syphilis is more amenable to cure with proper treatment during this stage than at any other period of its life cycle, and to wait for a positive Wassermann reaction may place the patient among the incurably diseased. The Wassermann reaction is usually positive during the stage of generalization. In those cases that show a negative blood, the clinical symptoms are usually so definite that there is little difficulty in making a diagnosis. During the stage of latency a repeatedly positive Wassermann means syphilis, but a negative one, in the presence of a positive history, does not exclude the disease. Late syphilis not uncommonly shows a negative Wassermann reaction, but the use of a provocative injection of arsphenamine, the clinical picture, or the results of a therapeutic test, usually suffice to clear up the diagnosis. The diagnosis of neurosyphilis depends on the finding of a positive reaction in the cerebrospinal fluid; examination of the blood alone cannot be relied on. Congenital syphilis usually shows a positive blood Wassermann after the first month, but in suspicious cases where the blood is negative, recourse must be had to the same procedure as for late syphilis plus the examination of the blood and spinal fluid of the father and mother; during the first half of pregnancy, a positive blood reaction usually means syphilis, but during the second half false negatives or false positives may occur necessitating postpartum re-examination.

[A. W. C.]

## Further Contributions to the Experimental Aspects of Iodid and Bromid Exanthems

Wile, Udo J. (*Archiv. Derm. and Syph.*, vol. 8, No. 3, September, 1923), and his associates presented last year a preliminary report on this subject, showing that the ingestion of bromid readily displaces the chlorid in the blood; that apparently the kidney, readily filtering through both chlorid and iodid, reacts differently to the salts of bromid. These tend to be stored up after their ingestion, owing to the difficulty of their filterability through the kidney epithelium. The constant ingestion and gradual storing up in the body of bromid (small amounts being eliminated through the bowels), leads to the clinical phenomena known as bromism.

The most striking manifestations of bromism are its effects on the central nervous system and on the skin. It was shown in their previous communication that no trace of bromid can be found in the local lesions of bromoderma, except possibly when these are contaminated by the circulating blood. It was further determined that there is apparently no relation between the amount of bromid ingested and the appearance of exanthem.

The author has since studied in detail three cases of mental and cutaneous manifestations of bromism, all of whom were markedly benefited, both with regard to the mental state and to the cutaneous condition, by the intravenous administration of decinormal salt solution given at two or three-day intervals.

In all three cases, bromin could not be determined in the urine previous to the administration of the salt solution. The prompt appearance of bromin (in two cases following the first injection, in the third following the second) leads to the conclusion that the mass action of the chlorid had thrown bromid out into the blood, relieving the apparent mental toxemia, and in a similar fashion causing a marked diminution and gradual disappearance of the cutaneous manifestations.

A sharp nephritis, together with symptoms of actual shock occurring in the first case, can be explained probably by the sudden chemical change taking place in the tissues. The irritating effects of the passage of a bromin salt through the renal epithelium adds weight to the theory before mentioned, that bromid does not readily filter through the renal epithelium. Further weight is added to this view by the prompt disappearance of the nephritis coincident with the disappearance of the bromid in the urine.

Intravenous injection of normal salt solution is advocated in the treatment of both cutaneous and mental symptoms of "bromism."

[A. W. C.]

## Quantitative Studies in Syphilis from a Clinical and Biological Point of View

Fordyce, J. A., Rosen, I., and Myers, C. N. (*A. J. Sy.*, vol. 7, No. 3, July, 1923), report in four related articles under this title in great detail the results of some further studies on the arsenic content of the blood and spinal fluid after neoarsphenamin, arsphenamin, and silver arsphenamin in the Swift-

Ellis method of treatment, and after arsphenamin and spinal drainage. A clinical discussion and interpretation will follow at the close of this series of papers.

### Chancre in the Axilla

Montgomery, D. W., and Culver, G. D. (*A. J. Sy.*, vol. 7, No. 3, July, 1923), report the case of a primary of the axilla probably caused by lending a dressing gown to a person of very doubtful character and who had an eruption and was ill. She was first seen by the authors when the lesion had gone unrecognized for over a month, until the rash and general illness had suggested its true nature.

### Chancre of the Lip

Parounagian, M. B., and Goodman, H. (*A. J. Sy.*, vol. 7, No. 3, July, 1923), discuss this subject in detail with many excellent photographs and about a dozen case histories. They emphasize the need of general prompt recognition of the true character of these lesions by the whole profession as some lip chancres are typical while some very harmless-looking lesions harbor the organism.

### The Use of Sodium Thiosulphate in the Treatment of Postarsphenamine Dermatitis Exfoliativa: Report of a Case

Sutton, I. C. (*A. J. Sy.*, vol. 7, No. 3, July, 1923), reports a case of postarsphenamin dermatitis treated successfully by this means, first suggested by McBride and Dennie. She had seven daily injections of the sodium thiosulphate in doses from 0.15 gm. in 10 c.c. of water to 1.0 gm. in 20 c.c.

### Some of the Factors upon Which the Successful Use of Local Anaesthesia Depends

Farr, R. E. (*The Canad. M. A. J.*, vol. 13, No. 7, July, 1923), concludes as follows: That it is his belief that local anaesthesia will be the choice for those who are willing to master the technique of its use for conditions in which it can be used successfully; that its successful use will depend largely upon refinements in the technique of its induction but more especially upon the development of a surgical technique which corresponds entirely with the demands of the best interests of the surgical patient and that aside from anaesthesia technique and surgical technique, success will be greatly augmented by attention to details which relate to the patient's general comfort. The training of hospital attachés and assistants, the gratification offered by proper equipment, the employment of a tactful psycho-anaesthetist, the utilization of the diverting and solacing effect of music and radio and an intimate and sympathetic understanding of the patient's mental attitude must all be given special heed by those who expect to be successful in the use of local anaesthesia.

[A. W. C.]

### The Jenner Centenary
### Anatomical Habitat of the Soul
### Gasserian Ganglion
### Incunabula

Editorially the March, 1923, issue of the *Annals of Medical History* is devoted to the centenary of the death of Edward Jenner, discoverer of vaccination. Two excellent portraits of Jenner are reproduced on the cover and frontispiece.

In the same issue Dr. Horace M. Brown, of Milwaukee, presents a study of the anatomical habitat or location of the soul from Hammurabi to Harvey. Of particular interest is the Cartesian theory of the pineal gland as its locus, in the light of modern knowledge of the endocrine functions of the pineal.

Viets, of Boston, in a note on the eponymic history of the Gasserian or semilunar ganglion, attributes its original description to Hirsch, 1765, and reproduces, with English translation, an excerpt from his Latin text, with illustration.

Fisher publishes a complete descriptive list of the 337 incunabula in the library of the College of Physicians of Philadelphia, augmenting a previous list of 256. This catalogue of rare books of the *cinquecento* is of great value to bibliophiles and students of medical history.

[R. M. G.]

### Ta Sheng P'ien

Maxwell and Liu (*Annals of Medical History*, June, 1923), describe interestingly a Chinese household manual of obstetrics from a copy of a book under the above title, printed from wooden blocks, in 1661. The author was a scholar at Van-chang and, despite some of the absurd conceptions common to his age and race, evidently possessed considerable practical knowledge and good sense. He counsels a due conservatism against premature intervention in labor, recognizes the dangers and some of the causes of miscarriage, discusses sex determination (which he attributes wholly to the father), opposes manual extraction of the placenta, and deprecates the excessive use of drugs.

[R. M. G.]

### Joseph Leidy, Anatomist

Middleton (*Annals of Medical History*, June, 1923) presents an admirable biography of Joseph Leidy on the centenary of the latter's birth. Succeeding Horner, as professor of anatomy, at the University of Pennsylvania, Dr. Leidy is best known as a great anatomist, but he rendered also distinguished service in the fields of biology and medicine, pathology and paleontology, mineralogy and botany.

[R. M. G.]

### Tuberculosis as a Systemic Disease

**Löwenstein**, from Paltauf's suotherapeutic institute at Vienna, suggests (*Wien. klin. Woch.*, August 2, 1923) a conception of tuberculosis as a bacillemia immediately following infection, the fate of which depends on whether the first localization occurs in a susceptible or an immune organ. If the former, the affected organ becomes diseased and metastases take place; if the latter, no disease results, but there is even an exaltation of the general resistance. Probably these principles hold good also for other bacteria and antigens. [R. M. G.]

### Tonsillectomy and Root Resection

From a series of cases in their medical clinic at Vienna, **Falta and Depisch** (*Wien. klin Woch.*, August 16, 1923) point out that after operative procedures on tonsils and teeth, acute exacerbation of existing arthritis, edocarditis, or nephritis, may be sometimes observed, due to liberation of infective material into the blood and lymph streams during operation. This suggests that operative technic and after-treatment should be subjected to revision from this point of view.

[R. M. G.]

### Roentgenologic Demonstration of Ascarides

**Reiter**, from Stonnig's Roentgen Institute at Innsbruck, notes (*Wien. klin. Woch.*, August 16, 1923) the possibility of demonstrating *ascaris lumbricoides* in the alimentary tract. This was first performed by Fritz of the same institute.

[R. M. G.]

### Foetal Indications for the Termination of Labor

**Hiess**, from Peham's Frauenklinik at Vienna, discusses (*Wien. klin. Woch.*, July 5-12, 1923) the indications for intervention in labor based on interpretations of variations in the rate and quality of the foetal heart sounds, and the correlative indications for abdominal or vaginal Caesarean section, version, extraction or forceps.

[R. M. G.]

### Functional Elongation of the Thigh

**Frisch**, from Gersung's orthopedic clinic at Vienna, points out (*Wien. klin. Woch*, July 26, 1923) that in ankylosis of the hip, with marked shortening of the femur, oblique osteotomy and extension are not adequate treatment, but should be supplemented by abduction correspondent to the degree of shortening, whereby the shortening is compensated by inclination of the pelvis. The abduction angle necessary for correction is determined by the existent shortening, the width of the pelvis, and the length of the thigh. Approximately this indicates an abduction angle twice the number of centimeters of shortening. The physiologic limits of the lumbar scoliosis thus produced permit abduction up to 35°, so that a shortening of even 17 cm. can be satisfactorily compensated. The abduction can be combined with the extension as a secondary procedure after preliminary oblique osteotomy.

[R. M. G.]

### Tonsils and Tuberculosis

**Fischer**, from Emmerich's pathologic institute at Kiel, discusses (*Münch. med. Woch.*, July 6, 1923) the relation between tonsils and tuberculosis. While primary tonsillar tuberculosis is extremely rare, he believes that the tonsil is often a port of entry for tuberculous infection which may localize in lung, lymph-nodes, joint, or kidney.

[R. M. G.]

### Cure of Infantile Rumination

From the pediatric clinic at Köln, **Siegert** reports (*Münch. med. Woch.*, July 13, 1923) a case of infantile rumination cured by temporary closure of the gastric cardia after meals by the introduction of an inflatable rubber bag through the oesophagus.

[R. M. G.]

### Echinococcus Disease

From his surgical clinic at Saragossa, **Lozano** presents with case reports (*Münch. med. Woch.*, July 27, 1923) a discussion of echinococcus disease of the liver, lung, kidney, bone, brain, heart, and pancreas. He also describes technic of operative treatment in the different localities.

[R. M. G.]

### Eclampsia

**Zweifel** (*Münch. med. Woch.*, July 27, 1923) summarizes the present attitude in Dödulein's Frauenklinik at München towards eclampsia with reference to aetiology, prophylaxis, and treatment. The results with therapeutic venesection have not been brilliant,—a maternal mortality of 17 per cent.

[R. M. G.]

### Criticism of Artificial Pneumothorax

**Jehn**, from Sanerbruch's surgical clinic at München, presents (*Münch. med. Woch.*, August 3, 1923) a criticism of artificial pneumothorax. In spite of many communications of favorable results of pneumothorax treatment of various diseases of the lung, he emphasizes from the surgical standpoint not only the uncertainty and danger of this method, but also the fact that valuable time is often thus lost for more effective surgical procedures. At present he recognizes the definite value of therapeutic pneumothorax only in certain forms of incipient progressive pulmonary tuberculosis. In chronic fibrous forms, he prefers extrapleural thorocoplasty.

[R. M. G.]

### Blood Changes in Variola

**Hoffmann**, from his observations during smallpox epidemic at Habana, reports (*Münch. med. Woch.*, August 10, 1923) the following regular blood changes characteristic of the disease: A marked increase of leucocytes from the fourth day after onset, marked relative lymphocytosis, high eosinophilia, and presence of myelocytes. A similar blood picture occurs only in varicella, in which, however, there is generally early leucopenia, with slight leucocytosis from the ninth day after onset. He believes that in doubtful cases, blood examination may be of striking significance for the demonstration of the disease.

[R. M. G.]

### Hysterectomy in Certain Cases of Pulmonary Tuberculosis; Particularly as an Alternative for Therapeutic Abortion

**Baldwin, J. F.** (*Surg., Gyne. and Obstet.*, August, 1923), after reporting six cases in which this operation was performed with good results on women suffering from tuberculosis of the lungs, suggests that in properly selected cases of pulmonary tuberculosis with pregnancy as a complication, or too profuse or frequent menstruation, an open hysterectomy with, as a rule, the saving of the appendages, will remove a most serious handicap and give the patient the best possible opportunity to recover from primary disease.

[E. H. R.]

### Endothelioma of the Spleen. A Study of Two Cases, with Review of the Literature of Primary Malignancy of the Spleen

**Smith, C. E.**, and **Rusk, G. Y.** (*Arch. of Surg.*. September, 1923), write as follows:

"1. We are able to find 104 reported cases of malignant disease of the spleen.

"2. We report two cases of primary endothelioma of the spleen arising from the endothelial cells of the sinuses, which we believe is not an uncommon type of tumor of the spleen.

"3. Lymphosarcoma is probably the most common type of tumor and is usually part of a generalized process which may appear simultaneously or later in other lymphoid tissues of the body.

"4. Neoplasms of the spleen should be amenable to surgical treatment, and exploratory laparotomy is justifiable in cases in which a well-founded suspicion exists as to their presence."

[E. H. R.]

### Syphilis of the Stomach

**Larimore, J. W.** (*Surg., Gyne. and Obstet.*, August, 1923), concludes that consideration of these cases in connection with the previous literature emphasizes the following points:

1. Gastric syphilis manifests a variable symptomatology, a chemistry, and x-ray findings that cannot consistently be of other well-recognized gastric disease.
2. The presence elsewhere of other undoubted signs of syphilis is a very large support to the diagnosis of syphilis of the stomach, and when absent great care must be used in making that diagnosis.
3. Successful medical treatment is diagnostic only in early gastric syphilis. Restoration to normal gastric motility cannot be expected in well-advanced gastric syphilis. The clinical response to antiluetic treatment will not then be helpfully diagnostic.
4. Surgery is indicated in late cases with permanent impairment of the gastric motor function. It is indicated by the clinical course and by the x-ray findings. Resection of the pre-pyloric stomach is the preferred operation. [E. H. R.]

### SYPHILITIC OBSTRUCTION OF THE ESOPHAGUS

**McMAHON, F. B.** (*Surg., Gyne. and Obstet.*, August, 1923), states that:

1. Stricture of the esophagus is a rare complication of visceral syphilis.
2. It may simulate carcinoma of the esophagus or other obstructive lesions.
3. The clinical history—positive serological tests, x-ray findings, and signs and evidences of syphilis elsewhere—will aid in the differential diagnosis.
4. Thorough antisyphilitic treatment is imperative.
5. The obstructive features of the disease are surgical and respond to instrumental dilatations. These dilatations must be repeated at varying intervals over a long period of time.
6. Gastrostomy should be performed in obstinate or advanced cases, if necessary, to maintain nutrition, if the more conservative methods fail promptly to relieve the obstruction.
7. The possibility of a malignancy being superimposed upon a syphilitic ulceration must be considered. [E. H. R.]

### CARCINOMA OF THE BLADDER

**DEAVER, J. B., and MACKINNEY, W. H.** (*Annals of Surgery*, August, 1923), summarizing the salient facts regarding carcinoma of the bladder as deduced from their experience, say that:

1. Carcinoma of the bladder occurs from three to four times more frequently in males than in females.
2. A family history of carcinoma was elicited in 12.2 per cent. of our cases.
3. Transient, symptomless hematuria is, as a rule, the first and frequently the only symptom of bladder tumor.
4. Such hematuria demands cystoscopic investigation; watchful waiting spells disaster.
5. A patient may live for a long time with a true carcinoma of the bladder, indicating a low degree of malignancy, and this, coupled with the recognized infrequency of metastasis, should place carcinoma of the bladder in a particularly favorable field.
6. Papillary carcinoma is ten times more frequent than infiltrating squamous-cell carcinoma.
7. Only in two-thirds of the carcinomas of the bladder encountered was any form of treatment justified. This is due to procrastination in diagnosis.
8. Practically all tumors of the bladder are malignant.
9. Cystoscopic fulguration is the best treatment of small or medium-sized single pedunculated carcinomas, uncomplicated with cystitis. It has little place in the treatment of semi-solid, sessile papillomas, and no place at all in the treatment of advanced papillary tumors or of infiltrating or squamous-cell carcinoma.
10. A choice of operative method in the treatment of carcinoma, here, as elsewhere, depends upon the situation of the tumor. Resection of the bladder with the tumor attached, where such can be accomplished without necessitating transplantation of the ureters, appears to us as the method of choice. Where resection cannot be done, excision with the cautery, or high-frequency destruction, is the next best procedure. The mortality of extensive resection with transplantation of one ureter, or total extirpation of the bladder with transplantation of both ureters, is extremely high, and is practically never justifiable. Radium has accomplished little in the cure of carcinoma of the bladder and has probably hastened a fatal termination in many cases in which it has been employed. [E. H. R.]

### PATHOLOGICAL CHANGES, OCCURRING IN THE SPINAL CORD, FOLLOWING FRACTURE DISLOCATION OF THE VERTEBRAE

**THOMPSON, J. E.** (*Annals of Surgery*, August, 1923), writes as follows:

At the present time there seems no probability of agreement as to whether operation is either advisable or justifiable. Some surgeons believe that operation should be performed in every case as soon as possible, in the hope of finding some conditions, such as hemorrhage or deformity, the removal of which will prove of benefit to the patient. Others never operate under any circumstances because they believe that it is useless to expect injured cord to recover. Extreme views are seldom wise. The middle course is always safest (*in medio tutissimus ibis*). I have personally for many years been strongly opposed to operation as a routine practice. It is often unsafe, rarely justifiable and usually futile. Except in rare instances where median incision of the cord is the objective, mere exposure of the injured segment is all the surgeon can hope to accomplish, because deformity is seldom persistent and massive hemorrhages do not occur. I believe that the only positive indication for operation is the persistence of deformity of such a degree as to justify the assumption that the cord is subjected to pressure. Even with such strict limitations, incomplete lesions alone would be benefited. If it were possible to distinguish with certainty, complete from incomplete transverse lesions in the early period, the problem would be solved. At the present time we are unable to decide, and consequently we must either wait days or weeks for unequivocal signs or operate early in the hope of affording relief. I firmly believe that waiting is the best and safest course. [E. H. R.]

### MANAGEMENT OF INJURIES TO THE CRANIUM AND ITS CONTENTS

**BOWER, J. O.** (*Annals of Surgery*, Oct., 1923), presents a very interesting and well illustrated article on this important subject. He shows that the determination of the amount of pressure under which the cerebral spinal fluid is held is greatly influenced by the position of the patient. The manner in which the cerebro-spinal fluid issues from the lumbar puncture needle is not an accurate measurement of the pressure. To be accurate, one should measure it with the mercury menometer. The patient should be in the lateral prone position and the needle inserted into the second lumbar interspace. The fact that fluid spurts out apparently under pressure does not necessarily mean that the pressure is high unless the menometer registers it so, nor does a mere trickle of fluid indicate a low pressure.

The author also emphasizes the importance of frequent blood pressure readings. He believes that the local extent of injury, the reading of the cerebrospinal pressure and the blood pressure are even more definite indications for operation than are shown by the eyegrounds or other signs in the reflex system.

Operation is often done under novocaine alone if the patient is unconscious, but the author believes that ether as a general rule is the best anaesthetic. He devotes some space to the description of illustrations for repair of defects in skull, and his illustrations of this procedure are valuable.

He draws the following conclusions:

1. In injuries to the cranium or its contents, lumbar puncture with spinal fluid pressure observations are essential to proper management.
2. In certain cases, withdrawal of fluid may so reduce intracranial pressure that operation may be avoided; in borderline cases it is a means of determining early the least degree of intracranial tension; blood-pressure reading at definite intervals may accomplish this in part, but one may have an increase in intracranial pressure and no corresponding increase in blood-pressure.
3. Cerebrospinal pressure observations are important before and after plastic operations on the skull.
4. Finally, repeated examinations of the spinal fluid for microscopic blood are of importance in differentiating the less severe types of cerebral trauma.

[E. H. R.]

## Leucoplakia Buccalis

DeForest, H. P. (*Annals of Surgery*, Oct., 1923), presents a profusely illustrated article on this subject and goes into considerable detail, giving the case histories of seven marked cases. He also gives the etiology, symptomatology, differential diagnosis, and treatment, and draws the following conclusions:

"Leucoplakia buccalis then may be regarded as a chronic, slowly progressive disease over the buccal mucous membrane.

"The etiology of the disease is unknown. Local irritants in the mouth are unquestionably factors in its production, but it is probable that it is a disease of parasitic origin. Just what the parasite is remains to be determined, but that it is similar in character to the known parasite which causes syphilis and to the unknown parasite which often leads to the production of epitheliomata in the same region, is probable. Whether this parasite resembles the spirochaete, whether it is a protozoal form similar to a plasmodium of malaria, of Texas fever, of sleeping sickness or of other diseases, is not known. At any rate, it seems probable that it may be destroyed by the same means now at our disposal which destroy the spirochaete. The writer has used salvarsan in two cases of malaria in which the plasmodium was found before the injection. Both patients have never had a subsequent chill, all their malarial symptoms have disappeared, and health has been restored. Subsequent examinations of the blood failed to show plasmodia. In one instance of non-operable small round-celled sarcoma of the upper jaw, subsequent to an operation where the entire superior maxilla was removed and the diagnosis determined beyond all question in one of the best hospitals in the city, this remedy was also administered with excellent results. Pain was eliminated, and for at least a year no further progress of the disease took place. It seems probable that arsenic administered in this form may be safely and widely used in all forms of disease of parasitic origin, non-bacterial in character. The capsule surrounding most of the bacteria appears to prevent the destructive action of arsenic and thus prevents beneficial results from being secured by the injection.

"It, of course, would be unwise to predict that all cases of leucoplakia can be as readily cured by this means as the two which have been recorded, but at any rate, it is safe to state that a new weapon has been found which will in some cases at least act efficiently as a cure for a disease notoriously resistant to all former methods of medication or of treatment."

[E. H. R.]

## Intercostal Thoracopuncture for the Removal of Penetrating Projectiles in the Lung

Jackson, C. (*Annals of Surgery*, Oct., 1923), presents a very interesting article based on a case reported, and draws the following conclusions from this case:

1. In lung mapping by the author's method of bronchoscopic insufflation of bismuth subnitrate we have a harmless and efficient aid in the study and localization of penetrating foreign bodies and their secondary pathology.
2. In "casing off" the operative lung and "piping" the sound lung with a close fitting bronchoscope introduced through the mouth we have a safeguard in thoracic operative procedures, inasmuch as the absolute control over the sound lung enables the bronchoscopic assistant to prevent blood entering the sound lung and to maintain ventilation indefinitely whether the patient's breathing movements are suspended or not.
3. Thoracopuncture, carefully done, with necessary precautions, in suitable cases, seems such a minor procedure compared to extensive rib-resection that it promises to modify the adverse opinion held by some surgeons as to the immediate presuppurative removal of small penetrating shell fragments, bullets and other penetrating projectiles lodged in the lung.
4. I feel sure that any small penetrating projectile not located near the root of the lung can be removed by thoracopuncture under local anaesthesia and leave the patient in better condition than if the projectile had gone clear through and emerged without touching a bone or large vessel. I feel sure that any clothing cap would be brought away with the projectile, but there was no fabric in the case herewith reported.
5. Intercostal removal, of course, has the fixed limitation of the maximum available size of the intercostal space. Larger projectiles would require rib-resection. Even in such cases, the thoracopenetrator has the great advantage of penetrating the lungs without admitting air to the pleural cavity. Reaching and grasping the projectile under the fluoroscopic guidance are greatly facilitated by the uncollapsed state of the lung. After the intruder is grasped and brought to the ribs, resection may be done, while the projectile is held in the thoracopenetrator. If the intruder is known beforehand to be too large for intercostal removal, the rib-resection may be done first, care being taken not to make a leak through the parietal pleura. The thoracopenetrator will then go in with an airtight fit.
6. Thoracopuncture can easily be a very dangerous and rapidly fatal procedure unless the utmost caution is observed in its planning and performance, and in preparedness for possible emergencies. Clawing around the lung is unnecessary and dangerous. The thoracopenetrator can be, I think, inserted, closed, in a safe track, until contact is made with the foreign body; then the jaws can be opened, intruder seized without a single false move and withdrawn through the track of entrance. This track is planned beforehand so that the approach will be through parenchymal lung tissue. Thoracopuncture should not be attempted except by, or with the co-operation of, the thoracic surgeon. The co-operation of an expert röntgenologist with the Manges double

plane fluoroscope is essential for safety as well as success both in the planning and the execution of the procedure. It seems advisable to limit its use to penetrating foreign bodies in the periphery of the lung, avoiding the location of large vessels and the root structures.

7. Thoracopuncture is not advised for the removal of foreign bodies that have reached the lung through the natural passages, 99 per cent. of which can be removed through the mouth.

[E. H. R.]

## Resection of Stomach for Chronic Gastric and Duodenal Ulcer

**Lewisohn, R.** (*Annals of Surgery*, Oct., 1923), describes by drawings and text his operation for resection of the pyloric end of the stomach and reports twelve cases.

[E. H. R.]

## Recurrence of Inguinal Hernia after Operative Treatment

**Morrow, A. S.** (*Annals of Surgery*, Oct., 1923), feels that the operative cure of inguinal hernia is not the simple procedure that many surgeons regard it, but is an operation requiring sound surgical judgment, as well as considerable technical skill. Oblique and direct hernia should be looked upon as two distinct conditions, in both of which recurrence is probably more frequent than was formerly recognized—this being especially true of the direct form. Improvement in operative results is not likely to come from the development of an operation based upon new principles, but in the elimination of what are considered to be frequent causes of failure to obtain a permanent cure. These are:

1. Subjecting to operation patients in whom, on account of the type of hernia, and the condition of the parts that must be utilized for repair, there is small chance of obtaining a permanent cure.
2. The use of an operation which, while adequate in some cases, fails to meet the indications in an individual case.
3. The failure to thoroughly remove the sac or to recognize and remove a double sac.
4. Repair of the canal under tension.
5. Injury to the nerve supply of the inguinal region.
6. Infection.
7. Separation of the repaired structures from a failure of the sutures to hold, or from the strain of post-operative vomiting.

[E. H. R.]

## End-Results of Arterial Transplants

**Klotz, O., Permar, H. H., and Guthrie, C. C.** (*Annals of Surgery*, September, 1923), present a very interesting article largely based upon experimental work and upon the former work of Guthrie and Carrel relative to the end-results of arterial transplants. They show that there is practically always a dilatation of the vessel wall at the site of the transplantation which goes on to form a sacculated area resembling an aneurysm. This dilatation is a natural consequence of interference with the vaso-motor supply of the transplanted segment. These dilatations, however, do not necessarily in all cases interfere with the circulation. [E. H. R.]

## Relation of Surgery to the Vascular Sympathetic System

**Sherwood, W. A.** (*Annals of Surgery*, September, 1923), reviews the excellent blood vessel surgery reported by Leriche, who performed the operation of sympathectomy in causalgias, painful stumps, contractures following trauma, trophic ulcers, intermittent claudication, trophoedema, frostbite, Raynaud's disease, and several other conditions of neurovascular origin. Sherwood believes that this operation is rarely successful in frostbite or painful stump, but in trophic ulcers it is often very successful. He reports in detail a persistent case of ulcer of the stump which refused to heal after every imaginable treatment, which reappeared after re-amputation, but was entirely relieved by sympathectomy. The author believes that in many painful and intractable lesions of the extremities, as well as in other chronic lesions in which inadequate peripheral circulation seems to be a factor, this operation of removal of the arterial sympathetic ganglia is a means of relief or certainly of palliation. [E. H. R.]

## Acute Perforation of Duodenal Ulcer

**Shawan, H. K., and Vale, C. F.** (*Annals of Surgery*, September, 1923), write as follows:

Perforation of the duodenum, whether simple or as sequence to chronic ulcer, is a condition uniformly susceptible to cure by immediately instituted surgical means.

Two types of duodenal ulcer may perforate: the large, calloused, chronic variety, and the small, soft, recent type. A positive history of previous ulcer will aid in diagnosticating the former, while the findings of acute rupture are usually, not always, the inaugurating symptoms in the latter.

The early symptoms of rupture are fairly uniform and are the typical findings in upper intra-abdominal hollow viscus perforation. However, pain, rigidity, and restlessness may occasionally be intermittent rather than constant; soft ulcers exhibiting more frequently the intermittent factor than do hard ulcers. History alone may indicate the perforating organ or may be of doubtful value. A differential diagnosis is not of practical value, for the treatment is the same.

Immediate closure of the perforation is the prime essential in the surgical treatment. The desirability of additional procedures depends on the local findings and on the general condition of the patient at the time. Excision of the ulcer, modified pyloroplasty, gastro-enterostomy and their combination, each has its indication. More extensive surgery is rarely advisable. Our results having been equally satisfactory with the various methods used, we state no preference, preferring to individualize.

Careful attention to diet is of great importance early as well as long after the operation.

Preëminently, the immediate results depend less on the type of surgical therapy employed than on the time interval allowed to elapse between the perforation of the ulcer and its proper surgical treatment.

[E. H. R.]

## The Radical Operation for Teratoma Testis

**Hinman, F., Gibson, T. E., and Kutzmann, A. A.** (*Surg., Gyne. and Obstet.*, October, 1923), present an analysis of 79 cases, 10 of which are personal, and draw the following conclusions:

1. Testicular tumors affect all ages, but are most common between 20 and 50. Seminoma rarely occurs in children, while teratoma is relatively common. Duration of these tumors is variable, due to the frequency of periods of latency and quiescence in their development. The duration of the growth, or its clinical characteristics furnish no index as to whether or not metastases have occurred.

2. Diagnosis is chiefly a matter of exclusion. The growth may be mistaken for, or masked by, hydrocele. Four cases of radical operation have been performed

by mistake on gummata and massive tuberculosis, a fact which emphasizes the importance of careful examination of the tumor before proceeding with the radical dissection.

3. The pathogenesis of testicular tumors has long been a subject for dispute, but for clinical purposes it is convenient to divide them into two groups which occur with about equal frequency, namely, the seminoma and the teratoma. From the statistics on simple castration, teratoma gave a decidedly less favorable prognosis than seminoma. Analysis of cases of radical operation would seem to indicate an equally good prognosis for both groups.

4. Simple castration will cure 15 to 20 per cent. of malignant tumors of the testis. Obviously the operation in order to effect a cure must antedate glandular or other metastases.

5. Realization of the inefficacy of simple castration has led to the development of the present radical operation, which was made possible through exact knowledge of the primary lymph zones of the testicle, for which we are indebted primarily to Most (1899). This zone occupies the retroperitoneal lumbar area along the aorta and vena cava. The first successful radical operation was performed by Cuneo in France (1906), the patient remaining alive and well three years following the radical operation, in which a metastatic lumbar gland was removed.

6. Analysis of 79 cases of radical operation shows that nine cases had palpable metastases at the time of operation. That operation is contraindicated in this group is proved by the morbidity of 100 per cent. Thirteen cases revealed inoperable metastatic glands, not palpable clinically, at operation, so that a total of 22 out of 79 cases proved to be primarily inoperable.

7. Another group of 25 cases showed, on subsequent microscopic study, no metastases in the glands removed. Eight of these cases, however, died later of metastases, showing that either the gland area was not completely removed or that metastases were overlooked microscopically in those glands that were removed. Of the 25 cases, 12 remain living and well. Even granting that simple castration would have cured all of these 12 cases, the findings showing that it could have cured none of the others, it could then have cured only about 16 per cent. of the entire 79 cases.

8. In still another group of 26 cases the glands removed at operation showed metastases, and all 26 obviously would be doomed by simple castration. Our analysis shows that as a result of the radical operation, however, 17 of these cases are living and well, four for over four years, and eight for almost three years. It is reasonable to expect a fair proportion of the 17 who have not survived the four-year time limit, to be cured, since recurrence generally occurs within the first year.

9. X-ray and radium seem to be valuable therapeutic and palliative adjuncts to the treatment of testicular tumors. [E. H. R.]

### CHEMICAL CHANGES IN THE BLOOD OF MAN AFTER ACUTE INTESTINAL OBSTRUCTION

HADEN, R. L., and ORR, T. G. (*Surg., Gyne. and Obstet.*, October, 1923), draw the following conclusions from their experimental work, and present the definite indication for treatment with sodium chloride:

1. Definite blood chemical changes are found in acute intestinal obstruction, manifested by a fall in the blood chlorides, often a rise in the carbon dioxide combining power of the plasma and a rise in the nonprotein nitrogen.

2. The fall in chlorides is considered the chief factor of this change and indicates that the chlorides may be utilized by the body as a protection against the toxic agent.

3. The administration of sodium chloride in larger doses than that supplied by physiological saline is indicated in acute intestinal obstruction as a means of directly combating the toxemia.

4. Since an alkalosis is frequently present in intestinal obstruction, alkalies should be administered with caution.

5. We have estimated that in the presence of the toxemia of intestinal obstruction that sodium chloride as an initial dosage of 1 gram per kilogram of weight should be administered. The blood and urine chlorides should be closely followed to estimate the subsequent quantity of sodium chloride needed to keep the chlorides at a normal level in the blood. [E. H. R.]

### COMPLETE URINARY OBSTRUCTION DUE TO HYDATID CYST

DEMING, CLYDE L. (*Journal of Urology*, July, 1923), reports a case of multiple echinococcus infection, with cysts in the liver, diaphragm and pelvis, and general fibropurulent peritonitis, and 47 cases found in the literature are reviewed briefly. Of the 48 cases with complete urinary obstruction due to hydatid cyst, seven were not treated; 25 of the 41 patients recovered, 14 died, one patient developed incontinence and one improved. Of those operated on, 60.9 per cent. were cured and 34.1 per cent. died; 5 per cent. developed fistula or some other chronic condition. Error in diagnosis is responsible for at least 50 per cent. of the mortality, while secondary infection produced by suprapubic or rectal puncture is responsible for 40 per cent. of the deaths. [B. D. W.]

### ANTHRAX AND ITS TREATMENT

SANTEE, H. E. (*Annals of Surgery*, September, 1923), writes as follows:

Thirty-seven cases are reviewed.

This disease tends towards a septicemia from the local lesion.

Specific serum offers a very fair prognosis.

Its use should be intensive, both intravenous and local, at the outset.

Surgery has no place in the treatment of the lesion. Its use may be directly harmful. [E. H. R.]

### HYDRONEPHROSIS

QUINBY, WILLIAM C. (*Journal of Urology*, July, 1923), says hydronephrosis associated with an anomalous artery crossing the ureter at the uretero-pelvic junction is not very infrequent, and shows a strikingly definite symptomatology. Such aberrant vessels may spring from the aorta, spermatic, ovarian, or iliac. The outstanding feature is the dilatation of the renal pelvis. Symptoms, pain in varying attacks, sometimes with nausea and vomiting. Urinalysis and output do not vary much from normal. Treatment usually only operative, freeing of ureter, plastic, nephrectomy. [B. D. W.]

### EMPYEMA OF THE URETERAL STUMP FOLLOWING INCOMPLETE URETERECTOMY

HYMAN, A. (*Annals of Surgery*, September, 1923), reports on x-ray pictures of three cases, demonstrating very nicely the pocket or sacculated area at the end of the ureteral stump after operation, and he draws the conclusion that the ureteral stump left behind after incomplete removal of the ureter may be the cause of a persistent pyuria. Two of the cases operated on also demonstrate how difficult a surgical procedure it is to excise the stump, and emphasize the necessity when doing a primary ureterectomy for pyo-ureter, to excise the entire ureter down to its entrance into the bladder. [E. H. R.]

### End-Results in Malignant Disease of the Testis

Coley, W. B. (*Annals of Surgery*, September, 1923), writes as follows:

The number of permanent cures following surgical removal of the testicle for malignant disease is comparatively small, the proportion being not over 5 to 10 per cent. This number of cures, in our opinion, is not sufficiently increased by the radical operation of removal of the retroperitoneal glands by the abdominal route, to warrant the very considerable risk of such an operation.

Long-continued systemic treatment with the mixed toxins of erysipelas and bacillus prodigiosus, combined with thorough radiation of the abdomen and supraclavicular glands by radium or x-rays, offers a far better hope of permanent cure than any form of operative treatment alone.

If one waits after operation until a recurrence has taken place, marked regression of these recurrent tumors, and in some cases complete disappearance, may be expected from radium treatment; but in the great majority of these cases, the regression or disappearance will prove only temporary, and death from extension of the disease will occur.

[E. H. R.]

### Metastatic Hypernephroma, With Special Reference to Bone Metastasis

Gibson, A., and Bloodgood, J. C. (*Surg., Gyne. and Obstet.*, October, 1923), write as follows:

1. Hypernephroma is a comparatively rare condition.
2. Bone is a "tissue of predilection" for this tumor.
3. The pathogeny of hypernephroma is still *sub judice.*
4. Metastasis to bone is chiefly via the blood stream.
5. The bony metastasis is sometimes the only metastatic focus.
6. Complete skeletal roentgenographic examination should be made in every suspected case.
7. While mainly a lesion of later middle life, it is found in the young.
8. The malignancy of the condition varies enormously.
9. A solitary bone metastasis may be extirpated with good ultimate result.
10. In the presence of cachexia or multiple bone metastases, palliative measures only are advisable.

[E. H. R.]

### The Influence of Hemorrhage on the Mortality in Gunshot Wounds and Other Injuries of the Abdomen

Mason, J. M. (*Annals of Surgery*, September 1923), basing his article on the analysis of 69 cases, divides the cases into those with large amount of hemorrhage and a small amount of hemorrhage, and finds that the mortality in the large hemorrhage series is 88.8 per cent., as compared with 31.5 per cent. in the small hemorrhage series, showing the great importance of improvement in our treatment of the hemorrhagic part of the condition. The author believes that transfusion must be more extensively practiced: autoreinfusion should be practiced in selected cases. The article is of considerable value. [E. H. R.]

### Retroperitoneal Lipoma

Greensfelder, L. A., and Bettman, R. B. (*Surg., Gyne. and Obstet.*, October, 1923), say:

"In summary we might write that retroperitoneal lipoma are most apt to occur in elderly individuals, and usually in women. The symptoms are vague, varied, swelling of the abdomen being the most constant one. The prognosis is poor. The operative mortality is high, about 15 per cent, due to the likelihood of injuring the large abdominal blood vessels. Recurrences are frequent. The tumor may be a pure lipoma, but is apt to be a mixed tumor; sarcomatous degeneration is likely to occur. The tumor may arise from almost any retroperitoneal location, but most frequently has its origin in the pararenal fat. Clinical diagnosis is difficult." [E. H. R.]

### Tuberculosis of the Adenomatous Prostate

Barney, J. Dellinger (*Journal of Urology*, July, 1923), says tuberculosis of the prostate, apart from that coincident with epididymal tuberculosis, is extremely rare. A man, 57 years old, complained of vesical irritability for a year with difficult urination; retention, gradually increased so as to require catheterization. Rectally, the prostate was considerably enlarged, but showed no signs of malignancy. The epididymes were slightly thickened throughout, but the patient recalled no acute lesions of these organs. There was moderate pyuria. A two-stage prostatectomy was done. Owing to areas of induration and adhesions malignancy was suspected. A section of the prostate showed a fairly chronic and typically tuberculous process, which invaded the lumina of the glandular structure of the prostate, in addition to an adenoma of the prostate. The author believes that the adenoma was the primary lesion, because if tuberculosis had been the primary offender, it would have so destroyed the parenchymatous elements that adenoma could not have developed. The chest was negative for tuberculosis. Furthermore, tuberculosis of the genital tract generally occurs primarily in young adults, decreasing at and after middle life.

[B. D. W.]

### Absorption from the Urinary Tract

Magoun, James A. H., Jr. (*Journal of Urology*, July, 1923), says experiments made by him showed that certain dyes and bacteria can be absorbed from the normal kidney, ureters, and urethra. A small amount of dye can be absorbed from the normal and acutely inflamed bladder. Bacteria could not be recovered in the blood stream or various organs after injection into either the normal or acutely inflamed bladder. In considering the relative absorbability, the kidney would seem to have the greatest absorptive power, with the urethra second and the ureter third. It would appear that both experimentally and clinically, bacteria may pass from the pelvis of the kidney into the blood. In certain clinical cases the kidney, once infected, may act as a focus for a secondary bacteremia. [B. D. W.]

### Differentiation Between Tuberculous and Non-Tuberculous Inflammation of the Epididymis

Stevens, A. R. (*Journal of Urology*, July, 1923), says double epididymitis, found on examination, slightly favors a diagnosis of tuberculosis. A prior orchidectomy, or epididymectomy almost invariably means tuberculosis. A scrotal sinus of over a month's duration is probably tuberculous (but it may lead to a gumma). Tuberculosis elsewhere in the body means genital tuberculosis in over 90 per cent. of such cases.

[B. D. W.]

### Report of a Case of True Hour-Glass Bladder

Kretschmer, Herman L., and Morris, Harold L. (*Journal of Urology*, August, 1923), report a case of true hour-glass bladder; some cases reported as such should have been reported as diverticulae.

[B. D. W.]

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## ARS LONGA, VITA BREVIS

A recent article in the Journal by Dr. E. H. Bradford describes the course of medical education of fifty years ago when the poet-anatomist was in his flower and the Art was making its first overtures to Science. In those days a finishing year in Vienna and Berlin, in Paris and London, learning surgery from Billroth and studying pathology under Virchow was almost a necessity to the young disciple of Aesculapius, who wished to make his way and practice his profession in one of the centers of population.

The practice of medicine was then and for some time thereafter considered to be the logical goal of medical education, and the ultimate gain of the individual patient was the object most generally desired. In the German clinics, however, there was danger of the young seeker after knowledge losing sight of this object, for humanity was considered in the mass, the patient was somewhat of a laboratory animal, and the disease was more important than its host. In Paris, in London, and in this country a more humanitarian view obtained, and therapeusis was the keystone in the arch of which pathology was the foundation.

All knowledge is mutable, but the scenes of science, except in its fundamentals, shift more rapidly than do those of art. The engineering principles of Archimedes and the geometry of Euclid are wrought into the modern bridges that span our New World rivers, but the forms of those bridges change with each succeeding decade and each advance in scientific knowledge. The art of Greece, on the other hand, is finished and has never been surpassed. So it is with medicine. The scientific advances of which we are so justly proud; the investigations we conduct; the papers that we read will be cast into the discard in another twenty years. Our knowledge will be antiquated or forgotten, serving only, like fallen leaves, to fertilize another season's growth.

The art of medicine, however, the understanding of our fellow man and his reactions to health and suffering, is not new and does not change so rapidly. Amid these shifting scenes we are too inclined to over-value the novelty of each successive set, forgetting that the play was written long ago, and has remained the same despite the changing scenes and actors.

Many things are being forgotten. Let it never be said that the physician is forgetting his duty to the patient; the master his duty to the pupil.

## MEDICAL MEN AS SPEAKERS

To many of those physicians who attend national, sectional, and local medical meetings, the thought has undoubtedly come of how few of those expounding their views are able to speak in a way to enhance the value of their dissertations.

Sometimes the speaker's voice will be so low that only those in the front seats can hear. Again the delivery is so fast that the context can with difficulty be kept in mind. Clear enunciation and charm of diction are so rare that when they are encountered it is impossible to over-emphasize their value.

Sometimes, though the speaker can be well heard, his assumed or real lack of interest is as distressing as the less frequent crude enthusiasm so disagreeable to the sensitive ear.

Another of the common and uncomfortable habits of speakers is the hesitation and uncertainty of speech which at times is most painful to contemplate.

That the excellence of the subject presented should be so often marred by such faults of diction is a matter of regret, and one well worth the serious attention of those who are accustomed to address medical gatherings. That resolute effort and attention can greatly lessen such faults in many cases, to the greatly added pleasure of the audience, there can be no doubt.

## THE REPORTING OF SINGLE UNUSUAL CASES

MEDICAL reports of a single unusual case of injury or disease are at times criticized as being not worth while, and accomplishing no useful object, unless the whole subject is "worked up" with the literature and résumé of the other similar cases.

That at times the reporting of a single case may be of considerable value there can be no doubt. A report of a rare fracture with the history of the injury may be extremely valuable in leading to the recognition of other similar cases. Unusual fractures of the carpal and tarsal bones, so apt to be confused with anatomic variants and sesamoid bones, are cases in point.

Unusual muscle ruptures recorded may give the key to some other practitioner who has had a similar case, and this report crystallizes his diagnosis.

The reporting of such cases, if clearly and briefly done, is never amiss.

◆

# Miscellany

## ANNUAL CONFERENCE OF SECRETARIES OF CONSTITUENT STATE MEDICAL ASSOCIATIONS

THIS conference was held in the building of the American Medical Association November 16 and 17, 1923. The presidents of state societies and editors of the state medical journals were invited to attend these meetings. Dr. Burrage was unable to make the journey and the managing editor of the JOURNAL was appointed a delegate in his place.

In calling the meeting to order, Dr. Olin West, Secretary of the American Medical Association, reported that there are over ninety thousand members of the Association, of which number fifty-four thousand are fellows.

Attention was called to the reapportionment of delegates which will be made the first of April, 1924, based on the membership of constituent state societies and the importance of early reports to the Association setting forth the facts, was emphasized.

Only fellows of two years' standing preceding the annual meeting are eligible to membership in the House of Delegates.

The first paper of the session was presented by Dr. W. F. Donaldson of Pennsylvania, under the subject, "What Measures Can Be Initiated by County, District, and State Medical Societies for Increasing Organizational Efficiency and for the Promotion of the Professional and Economic Status of the Physician?"

He felt that the essentials in promoting efficiency are membership and leadership, and much responsibility rests on the secretaries, for they must have lists of eligible practitioners in addition to the members, and all qualified men should be induced to join the societies. A list of irregulars should also be kept for obvious reasons.

The programs must include high-grade scientific discussions, and the dues must be sufficient to enable the society to carry on its functions efficiently. In Pennsylvania the State Society assists the districts by furnishing speakers and paying traveling expenses. Especial attention is paid to the needs of the remote sections of the State. He recommended that county societies should be represented in boards of trade, chambers of commerce, and other civic organizations, thereby supplying all needed information on public health matters. He regarded publicity as very important, and would have programs of county meetings appear in the newspapers so that the public may know of the work done by physicians.

Announcement of the serious illness of A. T. McCormick of Kentucky, who was to read a paper, was made and the convention adopted a resolution of sympathy and hope for his speedy recovery. Dr. Frank Billings occupied the time assigned to Dr. McCormick's paper and advocated post-graduate instruction for physicians through the state and county societies. It should be recognized that teaching must be carried to the doctor through diagnostic clinics, which are valuable in proportion to the intimate relationship of the practitioner and teacher. If the highest measure of professional success is to be secured the scientific and economic status of the average doctor must be advanced. He felt that diagnostic clinics are of much greater value than operative displays.

Dr. Bunce of Georgia gave a detailed account of the post-graduate courses carried on in that State, which were conducted both at the medical centers and through the counties. These had proved to be valuable and generally attended. The results have been distinctly encouraging, although at first indifference had to be overcome. The meetings occupied a week in some places, and shorter courses were conducted in smaller and more remote localities. The courses, covering a week, were conducted in five counties and nineteen sessions were distributed over rural sections. Over 75 per cent. of the members of the state association took advantage of the instruction given. The exercises relating to tuberculosis, pediatrics, and crippled children were especially well attended. A Committee on Health and Public Instruction has been organized, on which physicians and laymen serve.

Dr. W. G. Ricker of Vermont, under the subject, "The Program for Regular Meetings," propounded the question, "What is the aim and purpose of medical meetings?" He described a common type of meeting, where those in attendance were wandering about conversing on various topics foreign to the subject under consideration, while comparatively few were trying to listen and get information. He felt that many attend because of the social instinct which prompts people to come together, only a portion being inspired with the desire for information. In order to accomplish the purpose underlying the call for a meeting, the topics must be of interest and the presentation should be logical and forceful. The custom of leaving selection of the subjects to be discussed to the speakers is wrong, the better way being for the committee in charge to arrange the program and assign the subjects to the speakers. He believed that society meetings should include scientific, medico-political, public health and organization problems. An especial feature should be the attendance of a representative of the American Medical Association competent to present the Association's problems and to show its relations to the component societies. He did not feel that volunteer speakers always interested the members, and that meetings should be arranged which would have for consideration matters which were supplementary to preceding conventions or, in other words, that a progressive sequence of interesting and co-related subjects should be followed so far as possible. A meeting should have a pedigree, a tradition and a background, and the sessions should be short and snappy. Since the doctor's wife is an important adjunct in carrying on his practice and helping in his social status an organized effort should be made to provide entertainment for the ladies.

Dr. Hassig of Kansas, under the title, "Fee Schedules and Collections," argued for business methods in the professional relations of doctor and patient. While he voiced the general sentiment of the profession toward the needy and unfortunate, he felt that everybody should pay for professional services commensurate with the common understanding of reasonable fees, and that doctors should educate the people to pay, just as they are trained to meet the financial responsibilities of daily life.

He felt that there should be a chair of business administration in the medical colleges, and that the profession suffers because many do not place adequate value on services rendered. There should be no free clinics except to the needy and indigent; all other patients are grafters.

Every clinic, however small, should be run on a business basis, for it has been found that many patients revel in free service. Contract practice was condemned because it is apt to be monotonous, irksome, and conducive to lazy habits on the part of the doctor, and especially is not conducive to good work. Contract practice displaces better practice. He felt that clergymen are not entitled to free service. Doctors should combine to maintain lists of "dead beats," for mutual protection.

Speaking of fee splitting, he felt that although there were difficulties in the way of its abolition, a national law should be enacted to punish those who are guilty of this practice, and any one known to be addicted to it should be excluded from the society.

Dr. Gallagher of Tennessee regarded the problems of the cults and quacks as old as medicine itself, and he felt assured that regular medicine had stood the test of time. We may expect cults under one form or another for all time, although we know that they are a real menace to the public. He believed in legislation requiring knowledge of the fundamental principles of medical practice, but that it should be constructive rather than combative.

Dr. W. D. Chapman of Illinois was very outspoken in criticism of the publicity given to the papers and discussions presented at the recent meeting of the American College of Surgeons in Chicago. He presented, as evidence, clippings from several newspapers which seemed to be the rankest sort of advertising, and suspected that they were inspired by the men whose work was referred to. He felt that if such publicity methods were permitted we could cordially fraternize with the cults, for some of the advertisements of the irregulars were modest in comparison with the exhibits.

He had no fear of the encroachment of the cults if the profession would maintain its accredited standards, for patients after wandering about in other fields, come back to the regular practitioner if they are suffering with serious troubles.

In speaking of the public press, Dr. E. A. Goodwin of Missouri felt confident that the public press writers have become convinced that medicine is making great strides, and that information relating to health matters is sought by the public. Newspapers really want accurate information and are ready to convey it, but we must understand that the press has its own standards and will not publish anonymous communications, so that in medical subjects the writer or speaker must be endorsed. The public has little interest in the internal workings of medical organizations, and all matters of importance to the laity must be presented in an attractive manner, but it should always be recognized that great care and conservatism should be exercised in any campaign, for publicity is a two-edged sword.

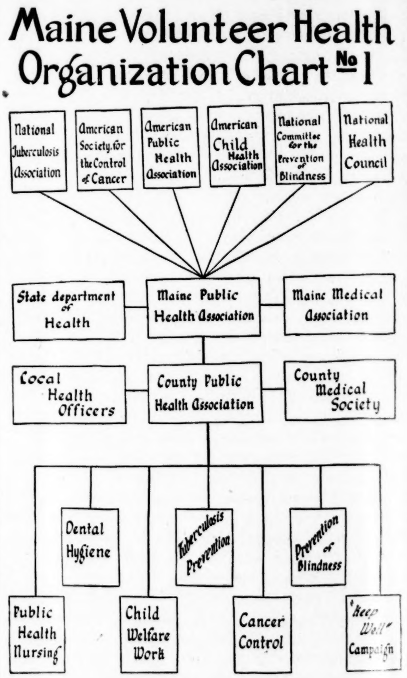
Dr. J. M. Dodson explained the functions of the Bureau of Health and Public Instruction which are to educate the public in a constructive way. Care should be taken to avoid saying too much about disease, but on the other hand teach the people the advantages accruing from the development of strong, vigorous bodies, better health, and therefore, greater efficiency. He felt that if the profession does not meet the expectation of the public, other agencies will monopolize the field. He spoke enthusiastically of *Hygeia* but felt disappointed because it had not been more generally endorsed, for it had been expected that the subscriptions would be five times the present number. In addition to reciting all the various methods of reaching the public, the value of the teaching of health matters by the family doctor was endorsed, and it is the duty of the American Medical Association to stimulate and help him so far as possible.

Dr. Drake, of Minnesota, answered the question of "How Can the Medical Profession in Its Organized Capacity Best Inform the Public Concerning the Benefits that Scientific Medicine Makes Available?" by recommending the use of the Radio and the selection of speakers by the Society who would address public assemblies. He felt favorable toward newspaper publicity which he ranked higher than the radio, and was inclined to feel that moving picture films should be made use of. He advocated the development of a radio service by the American Medical Association.

Dr. Taylor, of Texas, dealt with the subject "The Plan of the State Medical Association of Texas" and was convinced that the people should be furnished with a working knowledge of medicine. Formerly an effort was made to educate the legislators but the plan was not effective because the opponents educated the people at large so that now the plan in his state is to develop a method of lay publicity and it is expected that two thousand dollars will be available for this purpose. It is recognized that the average doctor will have to be educated to the needs of the present day demand for information. He thought that space in the leading papers of the centers should be utilized and from this as a beginning the campaign should extend to publicity in the smaller local publications. After the movement is well under way lay organizations could be induced to function under the direction of medical societies.

He strongly urged that we cease attacking the cults but that the public should be led to endorse the proposition that practitioners of the healing art should have an understanding of the basic sciences relating to medicine and the State should adopt a single standard of efficiency. He hoped that the profession would never employ chiropractic advertising methods.

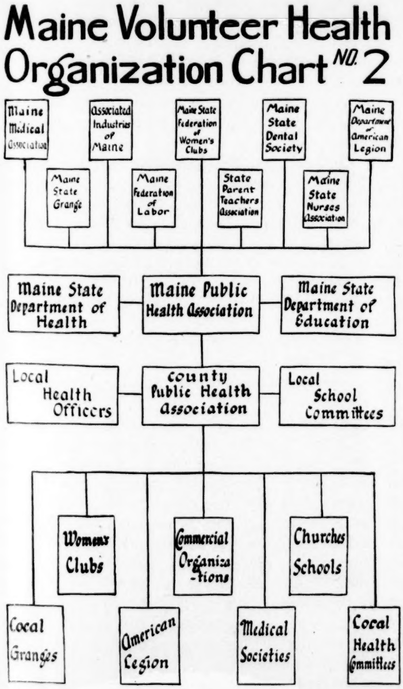
The regular program for the second day began with a paper by Dr. B. L. Bryant, of Maine, on the "Organization of County Medical Societies for Promoting Periodic Medical Examinations." He detailed the united activities of the professional and lay organizations in his State, and felt that the foundation of this movement meant an appeal to the physicians who might find some difficulty in adjusting themselves to the newer methods. He detailed the plans for bringing physicians together through articles in the state journal, publicity in the county units, coöperative health clinics and round table discussions. The difficulties met with in States made up largely of rural communities are lack of funds and the necessity of making use of unpaid volunteer workers who cannot give much time to affairs of this nature. He was encouraged to believe that the Maine State Medical Society would increase the annual dues, which are now four dollars, to eight, and then a full time secretary might be employed. The next step is a campaign among the laity which will be conducted by the State Board of Health and the voluntary health organizations. He presented the following outline of the scheme and charts to show how it will be worked out:


Maine Volunteer Health Organization Chart No 1
National Tuberculosis Association
American Society for the Control of Cancer
American Public Health Association
American Child Health Association
National Committee for the Prevention of Blindness
National Health Council
State department of Health
Maine Public Health Association
Maine Medical Association
Local Health Officers
County Public Health Association
County Medical Society
Dental Hygiene
Tuberculosis Prevention
Prevention of Blindness
Public Health Nursing
Child Welfare Work
Cancer Control
"Keep Well" Campaign

This subject aroused much interest, and Dr. Billings found in it much to endorse. So far as he had been informed this is the first organized move for periodic health examinations. He was uncertain, however, as to how far it could be put into successful operation unless carefully supervised by the State through county units, for the examinations must be properly made to be worth while and not create jealousy and antagonism, for it would be unwise to permit, or even encourage, personal advertising, and since examinations of this type should conform to some recognized standard, both as to method and quality, it must of necessity be done by groups approved by the county society and the quality of individual work will probably necessitate study on the part of many who might attempt these examinations.

It was the opinion of some of the speakers that although this plan is not designed to benefit physicians, the effect will be to improve, rather than decrease, the economic situation of the doctor.

At the opening of the exercises of the second day the delegates were asked to report the attitude of the profession and the public toward *Hygeia*. There was a very general response to this invitation, and comments of the speakers seemed to indicate a wide variety of opinions, some feeling that this journal is a modified medical journal, others, that the articles are too elaborate, and some, that it has not yet met the needs of many of those who ought to have instruction in health matters.


Maine Volunteer Health Organization Chart No. 2
Maine Medical Association
Associated Industries of Maine
Maine State Federation of Women's Clubs
Maine State Dental Society
Maine Department of American Legion
Maine State Grange
Maine Federation of Labor
State Parent Teachers Association
Maine State Nurses Association
Maine State Department of Health
Maine Public Health Association
Maine State Department of Education
Local Health Officers
County Public Health Association
Local School Committees
Womens Clubs
Commercial Organizations
Churches Schools
Local Granges
American Legion
Medical Societies
Local Health Committees

President Wilbur reported the experience of one physician who had found that a patient had become sufficiently interested in the topics discussed in *Hygeia* to ask him questions which he was unable to answer, the inference being that the medical profession would have to pay more attention to some fundamental health matters. Even with the expression of various opinions, all seemed appreciative of the purpose which led up to the publication of this journal and progress made thus far, and it was the general opinion that measures should be taken to increase its circulation. The promoters of the journal felt hopeful of bringing this about. The circulation should be 150,000 in place of the present number of about 30,000.

Mr. G. H. Winfrey, of Virginia, engaged in insurance business, explained the unequal burdens carried by physicians in automobile insurance, for out of one hundred and fifty millions worth of this class of insurance, three millions is carried by doctors. The insurance companies and agents derive an income from the insurance of one and a half millions, and the balance goes to pay losses and profits. Ten per cent. of the premiums now pay the losses due to physicians' insurance.

The members of the medical profession have been found to be, as a class, high grade risks, because of intelligence and the exercise of greater care than that shown by the average driver and therefore they have to contribute more than a just proportion of the risk which includes careless and incompetent drivers. Full coverage for the driver of a Ford car in New York costs $400 a year. This includes liability for fire, theft, etc. The average cost throughout the country for full coverage is $150 a year. He felt that if a company could be formed to cover only the doctors, the saving to the medical profession would pay for the expenses of the medical societies and in addition leave a large sum which could be used in carrying on research and public health activities. He advocated a mutual company with doctors on the directorate and felt sure that after the high initial cost of incorporation and the expenses of the early years that rebates and lowered premiums would follow.

The plan seemed attractive and met the approval of Dr. Olin West, secretary of the Association, and others. A motion was offered endorsing the plan and carrying the suggestion that the matter be referred to the state medical societies for further consideration. For some reasons not fully explained, Dr. West took the floor in opposition, although previously expressing approval, and the motion was lost.

Dr. E. W. Pope, Secretary of the California State Medical Society, gave a history of the rise and fall of medical defense and indemnity as developed and recently abandoned in the California Society. Although the opposition had succeeded in eliminating the feature of society activity, she felt hopeful that the fellows would be favorable to a resumption of this function in the future and vote for dues sufficient to meet the expense. Her allusion to doctors' ventures in oil and mining and indisposition to raise the dues of the Society was amusing.

In the discussion it was brought out that in some cases of group insurance certain state societies have insisted on conducting the defense by attorneys selected by them, in order to avoid the possibility of compromises by the insurance companies, thereby discouraging claims by unscrupulous lawyers. New Jersey has a plan practically identical with the one in operation in Massachusetts.

California physicians have been annoyed by many malpractice suits and nearly one-half the annual dues have been drawn upon in some years in meeting the expenses of defense.

The exercises were concluded by a paper on "The Activities of the Bureau of Legal Medicine and Legislation" by Dr. W. C. Woodward, former Health Commissioner of Boston.

He reported many requests for information and opinions involving law, ethics and the daily problems of doctors. One court decision relating to indemnity insurance covering operations involving the abdominal organs will serve as an illustration: The insurance company refused to pay a claim made by a plaintiff operated on for abscess in or about the kidney. The insurance company contended that the organs outside of the peritoneum are not in the abdomen, and the Bureau was asked where the kidneys are, if not in the abdomen.

Dr. Woodward did not give the solution of the problems presented, which was disappointing, although it was apparent that the difficulties were many.

The discussions of the subjects considered were animated and pertinent. Some of the salient points made, in addition to those previously referred to, were as follows:

President Wilbur deplored the antagonism sometimes exerted toward physicians and urged more definite attention to our own affairs and less concern about the cults, especially emphasizing the wisdom of avoiding attempts at restrictive legislation except so far as recognized standards are to be maintained. In common with many of the other speakers, he felt that the need for post-graduate study is important, clinics constituting the best methods, and harmony in the profession must be secured. Personal animosities must be eliminated if we are to accomplish the greatest good. He paid tribute to the medical men as a class, for he found them usually well trained and doing good work..

Dr. Pusey, President-Elect, expressed his admiration for the manner in which the subjects had been presented, for the speakers knew what they were talking about, and they are on the firing line, whereas, on the other hand, the specialist does not always know what is going on in the ranks, citing as an illustration, that if an obstetric subject was under discussion he would be at a great disadvantage, although the majority of the general practitioners have to be interested in this and many other departments.

Dr. Edward H. Ochsner, President of the Illinois Medical Society, felt that we are facing an important condition relating to medical politics, for the osteopaths, for example, will demand recognition by the regular medical societies in the near future and seek membership in them, for there are some well-trained men among this cult, although the majority are utterly incompetent. He explained what he meant by referring to the changed attitude toward homeopathy due to the advances made by this school. He criticized the medical teaching of the day, claiming that the great need is to teach students to become practitioners of medicine, rather than professors of medicine, and this reconstruction of our teaching methods will be the solution of the menace of the cults. He believed that professional house cleaning is needed in medicine, for an appreciable degree of incompetence and inattention on our part has opened the way for the cults.

Dr. Phillips, one of the Trustees of the American Medical Association, argued for advanced education of the general practitioner so that there would be more uniform methods of practice throughout the United States. This he considered to be the great outstanding opportunity of the Association, and a resolution setting forth the desire of the state societies would be a factor in inducing the Trustees of the Association to formulate plans and place its resources at the disposal of the profession.

Dr. Frank Billings distributed copies of his address delivered before the Ohio Medical Society two years ago, and the criticism of Dr. C. A. P. Read, together with his rejoinder. He discussed many of the subjects presented, uniting his opinion with that of many of the speakers to the effect that the great need of the present day is to provide for the general practitioner all needful assistance in keeping informed of the advances in medicine. He was ready to acknowledge that the general practitioner had reason to complain of the selfishness of the men higher up in the specialties, for it sometimes demonstrated that due consideration is not given to the rank and file.

In speaking of fees, he deplored the tendency to commercialism in medicine which seemed sometimes to apply to all classes of practitioners, but the worst exhibition of this fault lies in charging a fee, either large or small, for which the service rendered did not involve careful and painstaking study of the case. This he called charging for a scratch diagnosis, which is simply guessing rather than diagnosing.

Dr. Austin A. Hayden, Treasurer of the American Medical Association, said that he believed that doctors are ready to pay for instruction if the goods can be delivered, basing his belief on the experience of the Chicago Medical Society in endorsing a plan which arranged for advanced payments for the expenses of meetings. Under this plan, dinner tickets for nine meetings during the year were sold in advance, and the fact that an investment had been made and social features provided stimulated a greater interest and larger attendance.

From these brief reports it is evident that there is a consensus of opinion that the medical profession, as a whole, can profitably pay more attention to post-graduate study, that this must be brought about by concerted action along methods which should be uniform except that minor variations may be needed to meet local conditions, and that these plans ought to be formulated and supervised by the national, state, and county societies. Also, that the invasion of the cults will succeed in proportion to the indifference shown and inadequate quality of service rendered by regular physicians. And, further, that there is a growing belief in the necessity for regular health examinations so called, according to accepted standards.

The cordiality shown by the officers of the American Medical Association, acting as hosts and arranging for the comfort of the delegates, demonstrates a desire to be of the greatest possible benefit to the country and the profession through the development of the most efficient professional service.

## ESSEX SOUTH MEDICAL SOCIETY

The meeting of the Essex South Medical Society was held at the Beverly Hospital, Wednesday, November 21, at 5 p.m.

From 5 to 7 Clinics and Demonstrations were held by members of the hospital staff. The clinical program was as follows:

A Case for Diagnosis, Dr. C. L. Buck.

Gastric Cancer, Dr. L. C. Swan.

Basal Metabolism, Dr. A. E. Parkhurst.

Cough from a Naso-Pharyngeal Standpoint, Dr. T. H. Odeneal.

Fractures, Dr. John D. Adams.

Surgical Clinic, Dr. P. P. Johnson.

Exhibits in X-ray Department and Laboratories, Dr. I. K. Bogan.

Exhibits in Occupational Therapy Department, Miss P. Smith.

Dinner was served at 7.00 p.m. After which the regular business of the Society was transacted.

Dr. F. Gorham Brigham, of Boston, spoke on Insulin. Dr. Brigham went very thoroughly into the scientific and practical side of the treatment of diabetes, stressing particularly the importance of intelligent regulation of diet in all cases, and bringing out the fact that from eighty to eighty-five per cent. could be controlled successfully by diet alone, leaving only fifteen per cent. who really needed or should have insulin treatment.

He said insulin saves a great deal of time for patients as they can be made sugar free in a few hours or days, whereas by diet alone, the same case would require several weeks. It is, however, a very potent drug but if used in improper cases a very dangerous drug and should be used only in those cases which have been investigated by a doctor and found suitable for its use.

It is also expensive as it has to be used over a long period of time and its use should not be started unless it is possible to keep on with it. Also made clear the fact that insulin is given hypodermically in all cases, which is another disadvantage to its general use. It is however the most wonderful medical discovery in years, but it must be remembered that its improper use may be most harmful. Through the aid of insulin it is now possible to control severe cases which before could not be done by diet alone. It is also wonderful in its power to save desperate cases in which the patient becomes unconscious and otherwise would probably succumb.

At this meeting the Society voted to endorse the bill which is to come before the legislature at its next session, providing for a physical and mental examination of all prisoners in the State. The proponents of the bill being the Massachusetts Civic League.

About seventy members were attendants. After a vote of thanks to the directors and staff of the hospital for their part in the entertainment and program, and to Dr. F. Goram Brigham for his very illuminating talk on Insulin, the meeting was adjourned.

R. E. Stone, M.D., *Secretary.*

## A. C. H. A. PHYSICIANS' SCHOLARSHIPS AWARDED

The American Child Health Association announces that its Resident and Travel Scholarships for Physicians have been awarded to the following candidates:

Dr. Charles Armstrong, Salisbury, N. C.; Dr. William W. Bauer, Milwaukee, Wisconsin; Dr. R. L. Carlton, Winston Salem, N. C.; Dr. Eugene C. Chimene, Minneapolis, Kansas; Dr. William De Kleine, Saginaw, Michigan; Dr. Seymour Fiske, New York, N. Y.; Dr. Arthur M. Kimberly, Bristol, Conn.; Dr. George A. Lamont, Vancouver, British Columbia; Dr. George N. Leonard, Albany, N. Y.; Dr. Marie M. Long, Memphis, Tenn.; Dr. George C. Marlette, Bay Minette, Alabama; Dr. Walter R. Moore, St. Joseph, Missouri; Dr. Russell B. Sprague, Yarmouthport, Massachusetts; Dr.

Thomas D. Walker, Macon, Ga.; Dr. Ruth Weisman, Dorchester, Massachusetts.

The purpose of these scholarships is, broadly, to stimulate interest in child health work and to provide means for better training of physicians along this line.

The Special Committee on Physicians' Scholarships of the American Child Health Association included the following members:

Borden S. Veeder, M.D., Chairman; Fred L. Adair, M.D., Arnold Gesell, M.D., William Palmer Lucas, M.D., Ralph W. Lobenstein, M.D., Alan McLaughlin, M.D., Lawrence R. DeBuys, M.D., Clifford G. Grulee, M.D., E. J. Huenekens, M.D., Lawrence T. Royster, M.D., Anna Rude, M.D., Thomas B. Cooley, M.D., Philip Van Ingen, M.D., Robert L. De Normandie, M.D., Samuel McC. Hamill, M.D., J. H. Mason Knox, Jr., M.D., Henry L. K. Shaw, M.D., John M. Dodson, M.D., with whom were associated three members of the staff of the American Child Health Association, Courtney Dinwiddie, General Executive; Ella Phillips Crandall, Associate General Executive, and Richard A. Bolt, M.D., Director, Medical Service. The Committee on Awards included the following: Borden S. Veeder, M.D., Chairman; John M. Dodson, M.D., Alan McLaughlin, M.D., Anna E. Rude, M.D., Philip Van Ingen, M.D., Richard M. Smith, M.D.

These scholarships were awarded on the basis of graduation from an accredited medical school, and on evidence of the candidate's real interest in child health work as shown by training and experience. One hundred and one applications were received from thirty-six states.

Geographically, the applications were distributed as follows: Alabama 2, Arkansas 1, California 3, Canada 4, Connecticut 2, District of Columbia 1, Florida 2, Georgia 2, Illinois 4, Indiana 4, Iowa 2, Kansas 1, Kentucky 3, Louisiana 2, Massachusetts 8, Michigan 1, Minnesota 2, New York 11, North Carolina 4, Ohio 7, Oklahoma 6, Oregon 1, Pennsylvania 3, South Carolina 1, South Dakota 1, Tennessee 3, Texas 3, Virginia 1, West Virginia 1, Wisconsin 2, Wyoming 1. The four applications too late for consideration were received from Illinois, Kentucky, Nevada and Oklahoma.

Dr. Richard Bolt, Director of Medical Service of the American Child Health Association, is authorized by the Committee on Awards to act in an advisory capacity, personally assisting each candidate in the selection of courses which will be most valuable.

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## WELL BORN

(A two-reel motion picture produced by the U. S. Children's Bureau.)

The U. S. Children's Bureau has just produced a two-reel film "Well Born," which it is believed will meet the need, felt by all interested in the health of mothers and babies, for a simple and convincing presentation of the question of prenatal care.

The picture tells its story in a way which will interest and attract the average mother, whether she lives in a city apartment or on a farm. There is neither preaching nor scolding. The observer sees the experiences of two young couples in learning first, the need for special precautions on the part of the mother during the period before the baby is born and second, just what those special precautions are. Each prospective mother happily puts into practice the things she learns through the maternity clinic, the family doctor, the county nurse.

Shown in its preliminary form at a conference of directors of State divisions of child hygiene or child health at Washington, the picture was received with general approval. Such criticisms as were made were embodied in the revision and editing which took place before the film was finally released with the Bureau's approval.

The picture takes a little less than half an hour in showing. The acting is intelligent and sympathetic and the photography is unusually good.

"Well Born" will be lent by the Children's Bureau to responsible persons and agencies with the understanding that the borrower defrays express charges back and forth, employs a competent motion picture operator, and guarantees its safe keeping. Those who desire to purchase the film may also apply to the Bureau for information and prices.

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## UNITED STATES PUBLIC HEALTH SERVICE: INVESTIGATION OF RESPIRATORY DISEASES

Surgeon-General Cumming, United States Public Health Service, says that respiratory diseases. such as colds, influenza, and similar conditions, are responsible for a great deal of suffering, loss of time, disability, and a not inconsiderable number of deaths. There are few, if any, individuals who do not suffer from some acute respiratory condition at least once a year, losing from a day to a week or more as a result, to say nothing of the miserable feeling which such condition entails. Some of these attacks develop into chronic sinus inflammation, middle ear disease leading to deafness, mastoid disease, occasionally meningitis, and at times a latent pulmonary tuberculosis is lighted up as a result of one of these acute disorders.

The United States Public Health Service is undertaking a detailed study of common colds and other minor respiratory diseases and influenza in an effort to gather morbidity data over a sufficient period of time and over a large enough geographical area to render these studies of value in attempting to prevent these affections. Comparatively little is definitely known as to the real causes, distribution, manner of spread, and epidemiology of these so-called minor respiratory ailments, nor of inter-epidemic influenza, because these diseases do not appear in ordinary morbidity reports. These studies are the first of their kind to be taken up on such a broad scale.

To collect these respiratory histories, both negative and positive, certain groups of colleges have been selected where active coöperation has been obtained by circularizing and enlisting the support of the students in reporting to the Public Health Service twice a month their respiratory experience—whether or not they have had colds, bronchitis, tonsillitis, or influenza, for the two weeks' period covered by the report. Preliminary data are also collected relative to the incidence of influenza among those reporting, during the 1918 epidemic, whether or not they have been subject to chronic nose and throat trouble, the nature of underwear worn, ventilation of quarters during sleeping hours, and the like.

This work will be actively undertaken at Harvard University, Boston; Johns Hopkins Medical School, in Baltimore, Georgetown and Howard Universities, of Washington; Tulane University, of New Orleans; Ohio State University, of Columbus; University of Chicago, at Chicago, and the University of California, at Berkeley. By this selection of colleges, groups of individuals living in all sections of the United States will be enlisted and comparative studies made relative to the true occurrence of common colds and, among other things, influenza, at the places mentioned. It is hoped to determine the relation that the common cold bears to influenza.

It is anticipated that these studies will extend over a period of two or three years, and that the results will give a more definite idea of the epidemiology of respiratory disorders.

## WORCESTER DISTRICT MEDICAL SOCIETY

The November meeting of the society was held at the Grafton State Hospital an the 14th. It was called to order by the President, Dr. A. W. Marsh, at 5.30 p.m. On vote of the society the place and hour of the next meeting was left to the executive committee. It was announced that the subject for discussion at that time would be "Acute Pancreatitis," with Drs. Lund of Boston and Fallon and Seelye of Worcester as speakers.

Dr. Frothingham of Boston addressed the society about some proposed legislation which would give nurses' aids a legal status.

At the end of the business meeting the society adjourned to a buffet lunch provided by the trustees and the hospital staff.

After the lunch President Frank B. Hall of the Board of Trustees and President E. H. Bigelow of the Massachusetts State Medical Society addressed the meeting.

Dr. Channing Frothingham of Boston then gave the address of the evening on the "Pathology and Clinical Symptoms of the Disease, Epidemic Influenza, and Its Chest Complications."

He said that his talk was based on a study of the data obtained during the epidemic at Camp Devens in 1918. The disease has a definite pathology and can be recognized clinically. The etiology is as yet unknown, but the two most promising candidates for the etiological honor were the bacillus influenza and the bacillus pneumosintes. The pathology of the disease shows congestion of the respiratory tract, necrosis of some of the muscles, toxic lesions of the adrenals and testicles, and lesions in the lungs due to the virus of the disease.

The symptoms were the sudden onset with fever, prostration, cough followed by pinkish, watery sputa, and early cyanosis. There was a low white count. The treatment was expectant. For prophylaxis the value of the vaccines and masking was doubtful. Influenza pneumonia was the disease influenza plus a pneumonia. The treatment of the pneumonia was also expectant except where the type of the peumococcus was Type 1, in which case there was no doubt of the great value of the serum.

The discussion was opened by Dr. Gage and continued by Drs. Stevens, Greene, Hurd, Duggan, Stansfield, Sparrow, Flynn, Emery and Bragg. A vote of thanks was given to the trustees of the hospital and to the speaker of the evening.

## News Items

Notes from the Boston Medical Library.—The first numbers of the *British Journal of Anesthesia* have been received, and they speak well for this new entrant into medical journalism. This periodical, edited and published by anesthetists of Great Britain in the interests of anesthesia, began publication in July, 1923. It is a quarterly issued by Sherratt and Hughes, at Manchester. Subscription price is $10 per year for the United States.

The important gynecological and obstetrical library of the late Professor Droysen of Göttingen, consisting of over two thousand volumes and one thousand monographs, has been examined, and the items needed catalogued and placed on the shelves. The collection is very strong in the German literature and is a decided acquisition to the Reed and Chadwick libraries, making the gynecological and obstetrical sections as complete as any in the library. There is a large number of works on contracted and deformed pelvis and many rarities, among which may be mentioned the following: the first edition of the "Rosengarten" of Eucharius Röslin, 1573, the most important work having to do with Renaissance obstetrics; the 1551 edition of the "De partu hominis," by the same author; Jacob Rueff's "Hebammen Buch," 1600; Sigmundin's "Hof-Wehe-Mutter," 1690; Felix Würtz's "Wund-Arztney," Basel, 1612; Solingen's "Hand-Griffe der Wund-Arztney," 1693; the original edition of Frank's "System der medicinischen Politzen" in four volumes published at Mannheim during 1779 to 1788, and the original edition of Semmelweis on the etiology of puerperal fever.

### INTERESTING NEW BOOKS

Eidmann, Hermann. Die Entwicklungsgeschichte der Zähne des Menschen mit Berücksichtigung des Wirbeltiergebisses. 8°. Berl. 1923.

Faber, Knud. Nosography in modern internal medicine. 8°. N. Y. 1923.

Hegner, R. W., Cort, W. W., and Root, F. M. Outlines of medical zoölogy. 12°. N. Y. 1923.

Mayo Foundation. Papers from the, for medical education and research and the medical school. 8°. Phila. 1923.

Paracelsus, Theophrast von Hohenheim. Sämtliche Werke. 8°. Mün. 1922. Vol. 6. The first volume of the Sudhoff edition of the complete works of Paracelsus.

Port. Index der deutschen zahnärztlichen Literatur und zahnärztliche Bibliographie. 8°. Berl. 1922. German dental literature for 1908-1912.

Seuffert, Ernst von. Lehrbuch der Physikalischen, biologischen und klinischen Grundlagen zur Strahlen-Teifen-Therapie und ihrer anwendung in der Gynäkologie. 8°. Berl. 1923.

Sullivan, L. R. Essentials of anthropometry. A handbook for explorers and museum collectors. 16°. N. Y. 1923. A well-written concise manual on anthropometrical measurements.

HARVARD SCHOOL OF PUBLIC HEALTH.—The Dean and Faculty of the Harvard School of Public Health formally opened the school building at 55 Van Dyke street, Boston, on Wednesday afternoon, November 21st. Tea was served. The building thus taken over by the School of Public Health was formerly the Infants' Hospital, but is admirably adapted to the purposes of the school. Great activity in this phase of medical education may be predicted. Over one hundred students are expected to enroll this coming year.

CLOVER HILL HOSPITAL.—The formal opening of the Clover Hill Hospital, Lawrence, Mass., occurred on Saturday and Sunday, November 24 and 25. This is a modern hospital of 25 beds to receive surgical cases. Introductory remarks were made by Dr. N. F. DeCesare. The superintendent is Miss Mina M. Boober, late of the Henry Heywood Memorial Hospital of Gardner, Mass. The hospital is an open private hospital managed by an Advisory Board of Trustees: Dr. Harold R. Kurth, Dr. John T. Batal, Dr. Herbert Coulson, Dr. Charles L. Clay, Dr. N. F. DeCesare, Dr. A. Caldarone, Dr. E. S. Sawyer, Mr. J. Campopiano, Miss Mina M. Boober.

### ORDER OF EXERCISES

1. Remarks, Dr. Edward Sawyer.
2. "Non Surgical Drainage of the Gall Bladder," Dr. Franklin W. White.
3. "Surgery of the Gall Bladder," Dr. Frank H. Lahey.
4. "Abdominal Surgery," Dr. Arthur R. Kimpton.
5. Informal inspection of the hospital from 6 to 8 P.M.

Luncheon was served.

THE MIDDLESEX COLLEGE OF MEDICINE AND SURGERY OBJECTS TO THE METHODS OF THE AMERICAN MEDICAL ASSOCIATION.—Roy J. Boynton, M.D., Secretary to the Trustees of the Middlesex College of Medicine and Surgery, has notified the editor and general manager of the American Medical Association that an amount of money has been set aside by the president of the college for the purpose of suing the American Medical Association for libel if further publicity is given to statements which tend to reflect on this college. The letter contains vituperative allegations relating to the work of the Council on Medical Education, and records the decision of the college to refuse to allow any investigation of the institution.

DR. CHARLES E. PRIOR of Malden, who has been serving as Secretary of the Board of Registration in Medicine, has been reappointed. Dr. Prior went to Connecticut recently to submit to the authorities in that State information contained in the records of the Massachusetts Board that might be of assistance in the investigations of the scandal relating to the regulation of physicians in Connecticut.

CHANGE OF ADDRESS.—Charles E. Roderick has moved from Melrose to South street, Wrentham, Mass.

WEEK'S DEATH RATE IN BOSTON.—During the week ending November 17, 1923, the number of deaths reported was 218, against 221 last year, with a rate of 14.71, against 15.09 last year. There were 37 deaths under one year of age, against 27 last year.

The number of cases of principal reportable diseases were: Diphtheria, 93; scarlet fever, 73;

measles, 37; whooping-cough, 9; typhoid fever, 3; tuberculosis, 31.

Included in the above were the following cases of non-residents: Diphtheria, 9; scarlet fever, 1; whooping-cough, 1; typhoid fever, 1; tuberculosis, 6.

Total deaths from these diseases were: Diphtheria, 4; tuberculosis, 13.

Included in the above was the following case of a non-resident: Tuberculosis, 1.

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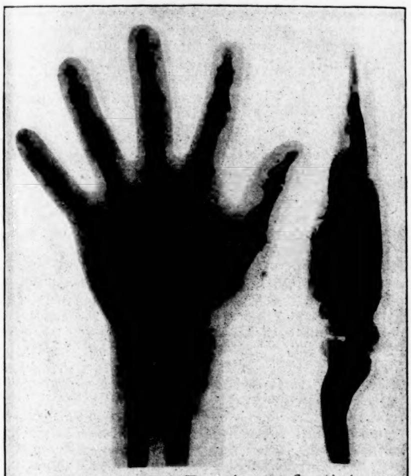

Colles Fracture of wrist set without use of X-Ray. Doctor settled out of court for $2,500.00

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## Correspondence

### LONDON LETTER

(From Our Own Correspondent)

September 14, 1923.

Street accidents in London are greatly on the increase. In April, May and June of this year, no fewer than 171 persons were killed in London street accidents. It is stated in the report of the London metropolitan police just issued that the proportion of deaths to cases of serious injury is generally low, and the actual number of deaths in London thoroughfares bears but a small relation to the total injury done to citizens. Street accidents of all kinds, grave and slight, reached the amazing figures during these three months of 18,028. Assuming this rate to be fairly constant for the twelve months of the year, the number of persons more or less injured by traffic in one year would be equivalent to the total population of the provincial town of the third rank. In analyzing the list it is found that the commercial motor vehicle is easily the chief Juggernaut. In the period referred to it killed 60 people and was responsible for 3391 accidents. No doubt a great many of these accidents are preventable; in fact, that is shown by comparing its casualty list with that of the motor bus. Motor buses, despite their somewhat evil reputation, are driven with quite reasonable care and skill. During the second quarter of this year they killed 18 people and were involved in 1391 accidents, but these totals do not approach the record of the commercial vehicles. Taxicabs, with five deaths and 1001 accidents, compare favorably with private motor cars, which killed 51 people and occasioned 4445 accidents, while motorcycles caused 1638 accidents, of which 13 were fatal. The moral to be drawn from these figures appears to be that while the congestion of traffic and the fact that slow traffic, rapid traffic and push bicycles, all using the same roads, are steadily increasing factors in street accidents, lack of skill and care in driving is woefully reflected in the casualty list. It is the foolhardy amateur, especially the one on the motorcycle and the inconsiderate driver of the heavy lorry, who are the greatest terrors, not only of the London streets, but of the country roads.

The meeting of the British Association for the Advancement of Science opened in Liverpool on the evening of September 12, when Sir Ernest Rutherford, the President for the year, gave his inaugural address. He spoke directly in the Philharmonic Hall to as many members as could be crowded into the building. Members who were unable to hear and see the President listened to the address as it was transmitted by telephony and a loud speaker in the lecture hall of the Association Exhibition. The speech was also broadcast by wireless simultaneously from all the stations of the British Broadcasting Company. It is expected that this meeting will be one of the largest in the history of the Association. Fifty Dominion and foreign representatives were present at the opening. Among these were: Professor Adams, Professor Eve, Professor Macallum, Professor Tate, and Dr. G. S. Whitley, of McGill University, Montreal; a strong deputation from the University of Toronto; Professor Bancroft and Professor Merritt, of Cornell University; Professor F. S. Lee and Professor M. I. Pupin of Columbia University, and Dr. K. G. Falk of New York. Sir Charles Sherrington, the retiring President, in introducing his successor hinted that perhaps Sir Ernest Rutherford has reached the edge of a discovery which will change life and the outlook of life.

In his presidential address Sir Ernest described the twenty-seven years which had elapsed since the last meeting in Liverpool as "the heroic age of physical science." The views of the old Victorian scientists that "inorganic" was synonymous with "dead" have been overthrown mainly by Rutherford himself, and the solid universe has now been found to be tingling with life to the minutest particle. Indeed, the atom is not merely the smallest conceivable sub-division of inert matter, but a sort of planetary system in miniature. As for harnessing "atomic energy," an idea which has greatly intrigued scientific imagination of late, Rutherford is not very optimistic on this point. Although there appear to be incalculable stores of energy involved in some of the processes concerned in the disintegration of the atom, there is no present justification for thinking that we shall ever be able to make them available for the normal work of the world.

Dr. Vaughan Cornish of Manchester gave a striking address as president of the Geographical Section of the Association. He developed his argument into a powerful plea for peopling the oversea dominions of Great Britain from the homeland, and urged in consequence the need for larger families. He pointed out that there was a school of thought which saw the salvation of the home country in a reduction of its population. In answer to eugenic and ethical arguments in favor of reduction of population as the salvation of Great Britain, Dr. Cornish said that professional families were far too few to maintain the supply of original genius needed for the country's advance, for genius had to be replenished from a very large reservoir of population. Moreover, a working class home was the best preparatory school for the colonial frontier, where to have few wants was better than the possession of many attainments. He drew from the census figures the deduction that if the size of the family was to be decided by choice the numbers of the race could not be maintained unless those who entered matrimony cherished the ideal of a family of four children. Unless the British race increase, concluded Dr. Cornish, they could not insure the internal peace and the external security of the Empire or the continuance of its work of enlarging commerce and restricting the range of war. Therefore, the birth-rate in Great Britain should be maintained above the death-rate, at least until the British population in the Dominions exceeded that in the mother country. The maintenance of the race would then rest chiefly with the people oversea, and, with their great resources, it should be possible for them to keep pace with the other growing nations. The above seems to be somewhat of a counterblast to the very numerous appeals and arguments for birth-control in this country. The lay press has taken up the subject, and the pros and cons are eagerly and occasionally acidly discussed in the daily papers.

The centenary of the *Lancet* occurs on October 5. I shall refer to it at length later. It will be as well to direct attention to the dinner in celebration of the completion of the hundredth year of the *Lancet's* existence as some Boston or New England medical men may wish to attend. This dinner will be held in London on Wednesday, November 28, next. Sir Donald MacAlister, President of the British General Medical Council, will take the chair, supported by the President of the Royal Society, the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons of England, the Minister of Health, the Chief Medical Officer of the Ministry of Health, the President of the Royal Society of Medicine, and the President of the Medical Society of London. Dr. J. H. W. Laing and Mr. H. D. Gillies of 71 Portland Place, London, are acting as Honorary Secretaries to the Dinner Committee.

A book of very considerable interest has been published recently by William Heinemann of London, written by Dr. Dan McKenzie, one of the best known specialists on the nose and throat in London. The title of this book is "Aromatics and the Soul," and is a study of smells. Odors, smells, stinks and stenches are dealt with in a most entertaining fashion; useful, solid facts are garbed in amusing language, so that the book is at one and the same time informative and highly amusing and intriguing. Dr. McKenzie describes how in only a comparatively short space of time civilized countries which used to reek with stenches have been transformed into more or less sweet smelling lands. Great Britain was the pioneer in this direction, and she has been closely followed, and in some respects, passed by America. It is pointed out that several diseases have their accompanying odors, and in every way the book will well repay reading.

Dr. Ernest Francis Bashford died suddenly of heart failure on August 23 last at Manderscheid, Eifel, Germany, aged forty-nine. Dr. Bashford was well known throughout the world for his researches into the causation of cancer. He had many friends in America, which he visited more than once and gave addresses. He received his medical education at Edinburgh University, where he had a most distinguished academical career. He graduated with the highest honors, taking many prizes and scholarships, among which the McCosh Scholarship of Edinburgh University, entitling the holder to study abroad. He was also awarded a Grocers' Traveling Scholarship, and studied under the late Professor Ehrlich at Frankfort. Later he was assistant to Professor Liebrich in the Pharmacological Institute in Berlin. In 1902 he returned to Edinburgh and became assistant to Sir I. R. Fraser. Later in the same year he was appointed director of the newly founded Cancer Research Fund, a position he resigned in 1914 through ill health. At the time of his death he was pathologist to the British Army of Occupation on the Rhine. Bashford did valuable and some original work in cancer research and paved the way for future investigators. He was a ready writer and added numerous contributions to the literature of cancer. He had crowded an immense amount of work into twelve years, but accomplished much.

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## INFECTIOUS DISEASES IN SWITZERLAND

Geneva, August 10, 1923.

*Mr. Editor:*

From time to time the foreign press publishes erroneous or very exaggerated reports on the epidemic of variola which has reigned and still continues in some parts of Switzerland. Therefore it is incumbent upon me at this writing to state that, although the disease has not disappeared, it is decidedly on the wane and thus it has maintained the benign character it presented from the onset of the epidemic. With the exception of a small focus at Bâle, which dates back to the early months of 1921 and which offered a certain gravity, the present epidemic has only two deaths to its credit. Hence, the cases are not malignant smallpox, as some newspapers have proclaimed.

In reality, the variola now present in Switzerland is far less dangerous than the ordinary contagious diseases, which never completely disappear in any country. It is only proper to add that the decision of the Federal Council making vaccination obligatory in those parts of Switzerland where the epidemic still reigns will, undoubtedly, soon put an end to it.

As to the frequency of infectious diseases, the Swiss newspapers have recently published certain statements which are liable to impress the public mind erroneously. They have stated that 79,000 cases of infectious diseases were reported in 1922, while there were only 23,000 cases in 1921. What they forgot to say is that this apparent increase was due to the return of the influenza epidemic—a disease subject to obligatory declaration in Switzerland—during the three first months of 1922 and which attacked about 60,000 people in a mild way, after which it almost completely disappeared.

If influenza be deducted from the list, it will be found that the other infectious diseases were greatly on the wane in 1922. Thus diphtheria dropped from 7700 cases to 4400 cases and typhoid fever from 400 cases to 260 cases. Therefore, I can affirm that the sanitary condition in Switzerland can be regarded as good.

I would now refer to the general results obtained from the investigation on venereal disease in Switzerland, carried out during the year beginning October 1, 1920, and ending September 30, 1921, by the Swiss Association for combating venereal disease.

The results of this investigation have a very great general importance, because of all similar investigations undertaken in other countries, including the United States, that of Switzerland, from its extent, duration, and the methods employed, may, at the present time, be regarded as the most complete and exact. I cannot, for want of space, enter into the details of this investigation, and will merely give a short summary of the principal results obtained.

1. Seventy-five per cent. of the medical profession in general, 95 per cent. of specialists for venereal disease, and all the clinics, polyclinics, and antivenereal dispensaries participated in this investigation.

2. The total number of cases of venereal disease announced by individual bulletins and collective cards was 15,607. The proportion of people treated for venereal diseases during the year of the investigation attained for the total of the Swiss population, without distinction of age, sex or civil status, 40 per 10,000 inhabitants. This proportion varied in the different cantons between the limits of 120 per 1000 (Canton of Geneva) and eight per 1000 (Canton of Schwyz). In the cities, the proportion averaged 83 per 1000, in the country (villages) nine per 1000.

3. The total number of persons who contracted venereal disease during the year 1920-1921 ("new cases") was 6707—the probable total, taking into consideration the collective cards, equals 8250.

Hence the annual percentage of venereal infection, without distinction of age, sex or civil status, attained, for the total population, 17.3 per 10,000 inhabitants (21 per 1000, taking the collective cards into account). This proportion varied from one canton to another within the limits of 51.8 (63.3) per 1000 (Canton of Geneva) to 2.5 (3.0) per 1000 (Canton of Schwyz).

4. The three venereal diseases were proportionately:

(*a*) Among *newly infected* persons (new cases) there were 74.6 per cent. gonorrhea, 23.7 per cent. syphilis, and 1.7 per cent. ulcus molle.

(*b*) Among *all venereal cases under treatment* there were 57.8 per cent. gonorrhea, 41.6 per cent. syphilis, and 0.6 per cent. ulcus molle.

The difference in the percentages of *a* and *b* is explained by the unequal duration of the three diseases.

5. Of the *total* of venereal cases treated (old and new infections combined) there were 68 per cent. males and 32 per cent. females.

As to "new cases," the proportion was: 75 per cent. males, 25 per cent. females.

6. In absolute, as well as proportional figures, the ages of from 20 to 24 years gave the largest number of venereal infections, and for males as well as females, they gave the highest annual percentage of infection, namely, from 70 per cent. to 100 per cent. on an average for Switzerland.

7. Divorced persons gave the largest proportions of venereal infection (130 per 1000); then come single people (70 per 1000), married people (38 per 1000), and, lastly, widowers (17 per 1000). If one envisages only single people, venereal infection attains its maximum frequency in males between the ages of 25 to 29 years, in females between 20 and 24 years.

8. Nine thousand, two hundred and ninety-one cases of gonorrhea were reported; 6653 in males, 2638 in females. According to these figures *gonorrheal morbidity* is, for the total population, 24 per 1000. The number of "new cases" reached 5004 (about 6400, taking the collective cards into consideration), which gives an annual percentage of 13 (17) per 1000 of gonorrheal infection.

9. Six thousand four hundred and nine cases of syphilis were reported: 3937 males, 2472 females. Hence *syphilitic morbidity* for the entire population is 17 per 1000. The number of "new cases" of syphilis for the year 1920-1921 attained 1588 (about 1850, taking the collective cards into account), which brings the annual percentage of syphilitic infection of the entire Swiss population to 4 per 1000 (4.5 per 1000).

10. All the above figures represent the *minimum*. Taking as a basis these statistical data and correcting certain causes for mistakes, one can approximately estimate that for the entire population of Switzerland, the probable number of persons undergoing treatment for gonorrhea during the year of the investigation was 12,000, for syphilis 8500.

The total number of persons who, among those at present composing the Swiss population, have had gonorrhea once during their lives, escapes all calculation. As to syphilis, it can be estimated by calculation: Taking as a basis the annual coefficients of syphilitic infection belonging to different ages, as they were established by the investigation, it amounts to approximately 37,000 cases.

During the past few months several very excellent books have appeared. "La Syphilis et le Praticien," by Dr. H. Drouin, Paris, 1923, Vifiot Frères publishers, is a very complete manual, well suited for the student and general practitioner. As interesting reading for advanced students, I would call attention to "Conférences de Clinique Médicale Pratique," by Dr. Louis Ramond, Paris, 1923, Vigot Frères, publishers. These are practical lectures on medical diseases encountered in everyday practice,—such as duodenal ulcer, arterial hypertension, cancer of the liver, etc. As collateral reading for the student these lectures are to be highly commended.

Another timely book is "La Pratique Microscopic," by Professors A. Juillet and L. Galavielle, Paris, 1923, Gaston Doin, publisher. This is an essentially practical work, illustrated with 128 figures and 50 colored plates. The authors, as teachers, have been wise in their treatment of microscopy, a subject of great import to the practitioner, and one not devoid of difficulties. The techniques are given in a clear and precise style, easily to be understood by the beginner, and devoid of all verboseness and undigested references, so common with German books of the kind.

Professors Hartmann of Paris and L. Bérard, of Lyons, have undertaken the editorship of a *Bibliothèque du Cancer*, which is to be published by Gaston Doin. The first two fasciculi composing this eminently interesting publication have appeared, namely, "Les Cancers du Rein," by P. Lecène and G. Wolfromm, and "Le Cancer de l'Intestin," by J. Okinczyc. The names of the distinguished editors are sufficient guarantee of the excellency of the work, and the authors of the first two fasciculi are too well known in the surgical world to require any introduction.

In closing, I would add that the French are lending interest in English medicine, as evinced by the recent translations of two books by British authors. I refer to Jamieson B. Hurry, whose book appears under the title of "Les Cercles Vicieux en Pathologie," the French adaptation from the third English edition, with additions, being done by Drs. C. Flandin and F. Françon, Paris, 1923, A. Maloine et Fils, publishers. The book has been improved upon by the translators.

Lastly, Llewelyn I. Llewelyn's book on gout has appeared from the press of Felix Alcan, Paris, 1923, translated by Dr. A. Françon, under the title, "La Goutte."

CHARLES GREENE CUMSTON.
*Lecturer in the University of Geneva.*

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## FEES

*Mr. Editor:*

Your editorial on the subject of "Fees" is, in my judgment, excellent and very temperate in its pronouncement. There is a word to add and it is this: Some men in our profession, notably among surgeons, or specialists, ask unconscionable fees. How change, or prevent it? I do not know. Often, they are men who occupy, otherwise, a very enviable professional position—but alas, "*auri sacra fames*" has got into their vitals and, seemingly, cannot be dislodged. They answer: Look at the lawyers, bankers, brokers, and see what they do. Or again, they say: If they, the patients cannot, or will not, pay my fee, let them go elsewhere. I always tell the patients, if they inquire, how much I charge for such an operation.

A prominent and skilful aurist, I know, told me some time since, he charged $1,500 for an ordinary mastoid operation. But I said, "Doctor, how can many people pay such a fee?" "Sorry," he answered, "let them then go elsewhere."

I freely admit there are not many such among the elect, but they exist and do great harm to their peers in our profession and the public are apt to brand, not a few, as being of that unsavory ilk.

Alas, the pity and shame of it! And even though limited to a very few.

BEVERLY ROBINSON, M.D.

New York, October 3d, 1923.

## AMERICAN AID FOR GERMAN MEDICAL SCIENCE

Under the letter head, appearing above, the following letter has been circulated:

*Dear Doctor*:

**I gratefully acknowledge the contribution to our funds for the assistance of German medical science.**

**May I ask your assistance in the following matter:**

**We are writing the secretaries of the local medical societies, asking that a direct collection be taken up for our committee at one of the meetings. We are doing this because the great majority of medical men will probably be willing to contribute a dollar or two at a collection, but do not care to send a check. Should the subject come up for discussion when you are present we would greatly appreciate your cooperation in advocating such a collection. With the constantly shifting political situation some may hesitate to give; perhaps you would be kind enough to point out that no matter what the political situation, the situation of the educated middle classes, the physicians in particular, will remain desperate and in need of our assistance.**

Very sincerely yours,

WILLIAM F. PETERSON, *Treas.*

## CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Nov. 16, 1923.

*Dear Mr. Editor:*

Just a word to tell you how much I appreciate the new move of the JOURNAL in giving us the Massachusetts General Hospital Reports. One of our hospitals used to subscribe for them and I used to carry them home for study with much pleasure and not a little profit. They had not come lately and I did not know whether they had been discontinued or not.

But now it seems we shall have them regularly and we all shall have the opportunity of reading them. I think it is one of the best things the JOURNAL has done in a long time. I don't know how it is with others, but I find it is much harder to visualize a case from the written records alone than from the same set of symptoms obtained from the patient directly. Dr. Cabot, with his fund of knowledge and with his keen nose for a diagnostic scent (he might not like the simile thus expressed) unravels the knots after the manner of the best writers of detective fiction. Let us hope you continue the series.

Yours truly,

H. L. SMITH.

Nashua, N. H.

## CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

112 Emerson Street, Haverhill, Mass.

*To the Editor:*

**From the standpoint of practical clinical value, it is my opinion that the Case Records of the Massachusetts General Hospital you have recently begun to publish are the greatest addition you have made to the JOURNAL. I attended them for several years. It seems as if you should, to give the men the most benefit, instruct them to study very carefully each case before looking for the diagnosis, for in no other way can one get much help from them. I congratulate you.**

I. J. CLARKE.

## HARVARD GRADUATE SCHOOL OF MEDICINE, WORCESTER EXTENSION COURSE

Worcester, Mass., November 14, 1923.

*To the Editor:*

**I have the pleasure of announcing a course of six lectures on selected subjects beginning Tuesday, November 27, 4.30 p.m., and continuing twice a week, Tuesdays and Fridays, until completed. The first lecture will be by Dr. Richard C. Cabot on the Diagnosis of Heart and Lung Diseases. Dr. Cabot will demonstrate diagnostic auscultatory signs by means of an electric stethoscope which permits a given lesion to be heard by all simultaneously. Place—City Hospital Amphitheatre.**

**The fee for the course will be $10; for any single lecture, $2.**

**It is necessary to know the exact number who wish to attend Dr. Cabot's lecture as the proper number of head telephones must be connected up, so please make use of the enclosed card. Dr. Cabot invites any physician taking the lecture to bring in a case for consultation and demonstration. Remember the date. Your suggestion for the remainder of the course will be welcome.**

ERNEST L. HUNT, *Local Director.*

## THE TREATMENT OF EMPYEMA

November 16, 1923.

*To the Editor:*

I have just read in the October 25th number of your journal a reference to one of my statements in the form of an unfavorable criticism.*

The writer says that I have violated an accepted surgical principle in holding the opinion that with the exception of tuberculosis, syphilis, actinomycosis, etc., "bacteriology in the operative treatment of empyema is of prognostic value only." Your contributor compares the surgical emergencies of empyema with those of acute peritonitis, properly holding that a colon bacillus peritonitis should not be placed in the same category with one arising from the gonococcus.

From a considerable experience in the treatment of empyema in all its forms I have concluded that while the bacteriology is of importance in the post-operative treatment it is, notwithstanding your contributor's opinion, "*of prognostic value only,*" when it has to do with the selection of an operative procedure. The title of the paper from which I have been quoted is, "Empyema: a Syllabus of Operative Treatment," which forms an attempt to standardize surgical procedures in all stages of empyema of the thorax which are the result of infection by the more usual pus-forming organisms.

Very truly yours,

HOWARD LILIENTHAL.

52 East 82nd Street, New York.

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*Penn: Empyema. BOSTON MED. AND SURG. JOUR., Oct. 25, 1923, p. 591.

## THE SOUTHERN MEDICAL ASSOCIATION

*Mr. Editor:*

No one who went as a visitor from New England to the most successful meeting of the Southern Medical Association just held in Washington could fail to be impressed by the earnestness and spirit of the medical profession of the South. This is the seventeenth annual meeting of the Society, which started in a small way by a combination of the three societies of the Southern States. Now there are eighteen sections and affiliated organizations, and members in large numbers traveled from Texas to Washington to attend the meeting. Anesthesia; Bone and Joint Surgery; Dermatology and Syphilology; Eye, Ear, Nose and Throat; Gastro-Enterology; Malaria Committee; Medical Education; Medicine; Neurology and Psychiatry; Obstetrics; Pathology; Pediatrics; Public Health; Radiology; Railway Surgery; Statistical Conference, Surgery, and Urology — make up the eighteen special meetings, so arranged that overlapping of time in allied subjects was reduced to a minimum. There is no need to speak of the high quality of the papers presented at any meeting of the American Medical Association. The discussion of the papers was frank, genuine, and enlightening, which is more than can be said of that which takes place in some meetings in the North.

An outstanding feature of the first general session held in the Continental Memorial Hall was the emphasis placed upon the place of the medical profession in its relations to the public. Dr. A. T. McCormack, the State Health Officer of Kentucky, Dr. W. S. Leathers of Mississippi, and Dr. W. S. Rankin, State Health Officer of North Carolina, spoke on matters dealing with public health and preventive medicine. The quality of Dr. Rankin's stirring address on "The Potentialities of Public Health as an Influence for Medical Organization" made it plain why the great State of New York had borrowed him from North Carolina. President Vincent of the Rockefeller Foundation spoke eloquently on the International Influence of Medicine, outlining also how fortunate this country was in being able to select from the three great systems of medical teaching, the British, the Latin, and the German. Dr. Barksdale, of Mississippi, spoke upon the obligations of the surgeon, and Dr. Roberts, of Atlanta, delivered an eloquent and finished address on "William Osler, Clinician-Teacher."

This last address brought out clearly one other outstanding feature of the meetings, the determination of the profession that clinical medicine is a worthy subject for study and instruction. The second general session was a symposium on the newborn. There were addresses on the "Care and Feeding" and on "Better Pediatrics for the Newborn," on "Intracranial Hemorrhage in the Newborn" and on the "Care of the Newborn from the Public Health Point of View."

The Southern Medical Association stands for betterment of the public health, for sound preventive medicine, and for good clinical medicine. The Association does not fear the petty side issues involved. This is the impression received by the visitor. There are many suggestions for organizations which the medical profession of New England may learn from their Southern brethren.

A Visitor from New England.

## NOTICES

### BOSTON CITY HOSPITAL

A Staff Clinical Meeting of the Boston City Hospital will be held in the Cheever Surgical Amphitheatre, Friday, December 7, 1923, at 8:15 p. m.

8:15-9:45 p. m. "Chronic Arthritis," from medical and surgical point of view. Speakers: L. M. Spear and L. Swaim. Discussion opened by L. Morrison. Open discussion. Physicians and medical students invited.

John J. Dowling, *Superintendent.*

### NOTICE OF EXAMINATION FOR ENTRANCE INTO THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following-named places on the dates specified:

| | |
|---|---|
| At Washington, D. C. | January 7, 1924 |
| At Chicago, Illinois | January 7, 1924 |
| At San Francisco, Cal. | January 7, 1924 |

Candidates must be not less than twenty-three or more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

H. S. Cumming, *Surgeon General.*

### PUBLIC HEALTH LECTURERS FOR THE YEAR 1923.

**The Committee on Public Health of the Massachusetts Medical Society has been able during the past few years to arrange with well known specialists in various medical fields to give talks at meetings of the District Medical Societies on subjects of interest and importance to all practitioners. It is a pleasure to announce that a similar arrangement has been made this year and that the gentlemen named below are willing, without expense to the District Society, to give occasional talks of thirty to forty minutes on subjects relating to the promotion of public health, extending opportunity for questions and discussion. It is suggested that medical societies consider meeting at neighboring public institutions, since such meetings have been most successful in the past, particularly at the tuberculosis sanatoria and state hospitals for the insane.**

José Penteado Bill, M.D., Doctor of Public Health. Specialty: Preventive Medicine.

Frank C. Dunbar, M.D., Bacteriologist, Instructor in Bacteriology and Pathology, Tufts College Medical School. "Methods of Technique in Collecting Specimens."

Walter E. Fernald, M.D., Superintendent, Massachusetts School for the Feeble-minded.

Timothy Leary, M.D., Professor of Pathology, Tufts College Medical School; Medical Examiner, Suffolk County.

Herman A. Osgood, M.D., X-Ray Department of the Boston City Hospital; "Focal Infection."

Edwin H. Place, M.D., Physician-in-Chief, South Department, Boston City Hospital. Specialty: Contagious Diseases.

C. Morton Smith, M.D., Chief of Department of Syphilis, Massachusetts General Hospital.

George Gilbert Smith, M.D., Assistant in Department of Genito-Urinary Diseases, Massachusetts General Hospital. Specialty: Genito-Urinary Diseases.

**Lesley H. Spooner, M.D.**, on Staff of Out-Patient Department, Massachusetts General Hospital. Specialty: Specific Diagnosis and Treatment of Pneumonia.

**George H. Wright, D.M.D.**, Lecturer on Dental Hygiene, Harvard Dental School. Specialty: Dental Surgery.

**Thomas F. Kenney, M.D.**, Director of School Hygiene, City of Worcester. Specialty: Full-Time School Health Officer.

**Paul Dudley White, M.D.**, Chief of Medical Out-Patient Department and of the Cardiac Clinics, Massachusetts General Hospital. Specialty: Cardiovascular Diseases.

**Gilman Osgood, M.D.**: "A General Practitioner's Observations on the Relation of Oral Infection to Disease."

**Francis H. McCrudden, M.D.**, Professor of Applied Therapeutics, Tufts Medical School: Health Examinations.

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## A COURSE OF FIFTEEN LECTURES ON THE MENTAL HEALTH OF CHILDREN

is being given in Boston University School of Education by eminent experts on child health under the direction of J. Mace Andress, Ph.D., Head of the Department of Psychology and Child Study, Boston Normal School, and with the coöperation and endorsement of the Massachusetts Society for Mental Hygiene.

The remaining lectures will be given on successive Monday evenings, at 8 o'clock, in Jacob Sleeper Hall, Boston University, 688 Boylston Street, Boston.

The course will be of practical value for teachers, mothers, ministers, social workers, and for all who are responsible for the training of children.

The subjects and speakers are as follows:

December 3. "School Entrance and the Pre-School Age." Arnold Gesell, Ph.D., M.D., Professor of Child Hygiene, Yale University, and Director Yale University Psycho-Clinic.

December 10. "High School—The Breaking Point." Frankwood E. Williams, M.D., Medical Director, National Committee for Mental Hygiene, New York City.

December 17. "Understanding the Wayward Child." Augusta F. Bronner, Ph.D., Director, Judge Baker Foundation, Boston.

January 7. "The Wayward Child in Court." Herbert C. Parsons, Massachusetts State Commissioner of Probation.

January 14. "Nervousness in the Light of Modern Psychology." Martin W. Peck, M.D., Chief, Out-Patient Department, Boston Psychopathic Hospital.

January 21. "The Mental Health of Normal Children." J. Mace Andress. Ph.D., Head of Department of Psychology, Boston Normal School.

## DISEASES REPORTED TO MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

WEEK ENDING NOVEMBER 17, 1923

| *Disease* | *No. of Cases* | *Disease* | *No. of Cases* |
|---|---|---|---|
| Anterior poliomyelitis | 9 | Ophthalmia neonatorum | 22 |
| Chicken-pox | 237 | Pneumonia, lobar | 57 |
| Diphtheria | 286 | Scarlet fever | 232 |
| Dog-bite requiring anti-rabic treatment | 4 | Septic sore throat | 5 |
| Dysentery | 1 | Suppurative conjunctivitis | 10 |
| Encephalitis lethargica | 1 | Syphilis | 48 |
| Epidemic cerebrospinal meningitis | 3 | Tuberculosis, pulmonary | 92 |
| German measles | 7 | Tuberculosis, other forms | 13 |
| Gonorrhea | 92 | Typhoid fever | 13 |
| Influenza | 6 | Whooping cough | 100 |
| Measles | 233 | | |
| Mumps | 144 | | |

## JOINT MEETING OF THE ESSEX SOUTH AND ESSEX NORTH DISTRICT SOCIETIES

By invitation of the Essex Sanatorium, there will be a joint meeting of Essex South and Essex North Districts, Friday, December 7, at 4 p. m.

Dr. Edward O. Otis will preside.

A clinic will be held by Dr. Pettengill, Dr. Stanhope and Dr. Zacks of the Sanatorium staff.

Dr. Swartz of the Berryburg, N. Y., Sanatorium will speak on "Non-Pulmonary Tuberculosis."

Dr. John B. Hawes, 2nd, of Boston will speak on "Pulmonary Tuberculosis, Diagnosis and Treatment."

After the clinic in the afternoon a moving picture on chest examination will be shown.

Dinner will be served at 6.30 p. m.

The speaking will be in the evening.

R. E. STONE, *Secretary*, Essex South.

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## SOCIETY MEETINGS

### DISTRICT SOCIETIES

*Bristol South District Medical Society:*

The annual meeting will be held in New Bedford, May 1, 1924.

*Essex North:*—Semi-annual meeting at Haverhill, January 2, 1924. Annual meeting at Lawrence General Hospital, May 7, 1924.

*Essex South District:*—The meetings for the year are as follows:

December 12, 1923:—Salem Hospital.
January 23, 1924:—Lynn Hospital.
March 19, 1924:—Gloucester Hospital.
May 7, 1924:—Annual meeting in conjunction with Lynn Medical Fraternity, Relay House.

*Franklin District:*—Society meets at Greenfield the second Tuesday of January, March, May, July, September. Annual meeting in May.

*Hampden District:*—The meetings for the year are as follows:

January, 1924, at Springfield. April, 1924, at Springfield; annual meeting.

*Hampshire District Medical Society:*

Meetings held bi-monthly, the second Wednesday in the month, at Boyden's Restaurant, Northampton.

*Middlesex South District Medical Society:*

December, 1923:—Hospital Day, probably at the Cambridge Hospital.
January 30, 1924:—Combined meeting with Suffolk District at the Boston Medical Library.
February 27, 1924:—Combined meeting with the Surgical Section of Suffolk District at the Boston Medical Library.
March, 1924:—Hospital meeting; place not yet determined.
April, 1924:—Annual meeting.

*Norfolk South District:*—Meetings first Thursday of each month at 11.30 a. m., December, January, February, March, April and May, at United States Hotel, Boston. The February and May meetings are stated meetings.

*Suffolk District Medical Society:*

December 19, 1923:—Meeting of Medical Section at the Boston Medical Library at 8.15 p. m.
January 30, 1924:—In association with the Boston Medical Library and the Middlesex South District Medical Society at the Boston Medical Library at 8.15 p. m.
February 27, 1924:—Meeting of Surgical Section, in association with the Middlesex South District at the Boston Medical Library at 8.15 p. m.
March 26, 1924:—Meeting of the Medical Section, in association with the Boston Association for the Prevention and Relief of Heart Disease, at the Boston Medical Library at 8.15 p. m.
April 30, 1924:—Annual meeting, to be held at the Boston Medical Library at 8.15 p. m.

*Worcester District:*—The meetings for the year are as follows:
December 12 in Worcester. Papers by Dr. Fred B. Lund of Boston and Dr. Michael F. Fallon and Dr. Walter Seelye of Worcester.
January 9 at St. Vincent Hospital, Worcester.
February 13 at Memorial Hospital, Worcester.
March 13 at City Hospital, Worcester.
April 10—A public meeting.
May 8—Annual meeting.

### STATE, INTERSTATE AND NATIONAL SOCIETIES

Schedule of meetings of the *New England Dermatological Society:*

Wednesday, December 12, 1923, at 3 p. m., in the Surgical Amphitheatre, Boston City Hospital.
Wednesday, February 13, 1924, at 3 p. m., in the Skin Out-Patient Department, Massachusetts General Hospital.
Wednesday, April 9, 1924, at 3 p. m., in the Surgical Amphitheatre, Boston City Hospital.